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# Moldova

— Rekindling Economic Dynamism —

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**WORLD BANK**

Macroeconomics & Fiscal Management Global Practice

Europe and Central Asia Region

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## Preface

In its Moldova 2020 report, the Government outlined seven priorities necessary to propel the economy to a higher growth path -- based not on remittance-financed consumption but on an export-driven model. These included improving education, roads, the financial system, energy, business, pensions, and the justice system. The Government has made progress in each of these areas, albeit unevenly (as is the case in all countries). The World Bank in its Systematic Country Diagnosis (2016)<sup>1</sup> reported on that progress and highlighted six areas that merited additional attention. These were: strengthening the rule of law; improving public service delivery; improving education and training; reforming the pension system; improving the business regulatory framework; and ensuring a sound macroeconomic and fiscal management. In addition, the Bank also provided a study on trade competitiveness (2015).<sup>2</sup> Another building block of this report was the UK-sponsored study on state enterprises completed in early 2017 that focused on the legal and governance aspects of state enterprises.<sup>3</sup> Subsequently, at the time of the writing of this report, the Government adopted the National Development Strategy “Moldova 2030.” The objective of the strategy is to enhance the quality of people’s life. It identifies ten strategic goals for sustainable development, including, of particular importance, increasing revenues from sustainable sources, reducing economic inequality, increasing access to physical infrastructure, improving working conditions, and ensuring quality education for all.

This current Country Economic Memorandum is intended to provide a comprehensive analysis of growth constraints and recommendations. While it updates some aspects of these earlier studies, its main focus is on enterprise performance. Insofar as enterprise performance occurs in a larger institutional context, this focus necessarily touches on several of the earlier themes, particularly the rule of law, business regulation, and education. The first chapter presents a diagnostic that highlights the problem of falling productivity in the enterprise sector and points to elements of market structure (particularly state ownership) that undermine productivity growth and curtail the growth of the private sector. This chapter also focuses on demand-side issues in export markets, and highlights policy lessons from sectors with high productivity that could drive future growth. A second chapter focuses on foreign firms, which are high-productivity enterprises within Moldova, and looks at investment promotion and ways to improve the contribution of Foreign Direct Investment (FDI) to the economy. Subsequent chapters extend the analysis to incentives shaping enterprise performance and opportunities for growth led by the private sector, particularly: competition and regulatory policies (Chapter 3); tax policy insofar as it affects incentives and tax buoyancy that underpin macroeconomic stability (Chapter 4); and finally, education as a crucial input into enterprise development (Chapter 5).

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<sup>1</sup> World Bank Growth, *Systematic Country Diagnosis* (Washington, DC: World Bank, 2016).

<sup>2</sup> World Bank Group, *Trade Study*, including: Note 1 - “Analysis of Trade Competitiveness”; Note 2 – “Is DCFTA Good for Moldova”; Note 3 - “Competitiveness in Moldova’s Agriculture”, (Washington, DC: World Bank, 2015),

<sup>3</sup> World Bank Group, *Support to State-Owned Enterprises (SOE) Preliminary Diagnostics and Reform Assessment: Phase 1*. (Washington, DC: World Bank, 2017).

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### Abbreviations

APIP Association of Producers in Manufacturing	MIEPO Moldovan Investment and Export Promotion Organization
CIT Corporate Income Tax	NPL Non-performing loans
CIS Commonwealth of Independent States	OECD Organization for Economic Cooperation and Development
DCFTA Deep and Comprehensive Free Trade Area	PFR Public Finance Review
ECA Europe and Central Asia	PCM Price Cost Margin
ECI Economic Complex Index	PIT Personal Income Tax
EIU Economist Intelligence Unit	PMR Product Market Regulation Index
EPZ Export Processing Zone	PPP Power Purchasing Parity
EU European Union	RCA Revealed Comparative Advantage
FEZ Free Economic Zone	R&D Research and Development
FDI Foreign Direct Investments	SCM Subsidies and Countervailing Measures
FTA Free Trade Area	SIRM Systematic Investor Response Mechanism
GCI Global Competitiveness Index	SME Small and Medium Enterprises
GDP Gross Domestic Product	SOE State Owned Enterprises
GVC Global Value Chain	SPS Sanitary and Phytosanitary
ICSID International Center for Settlement of Investment Disputes	STEM Science, Technology, Engineering, and Math
ICT Information and Communication Technology	TFP Total Factor Productivity
IMF International Monetary Fund	TVET Technical and Vocational Education and Training
IPA Investment Promotion Agency	VAT Value added tax
ISDS Investor state dispute settlement	WTO World Trade Organization
JCS Joint-stock Companies	
MNC Multinational Companies	

## Reviving Growth Momentum: Overview and Summary of Recommendations

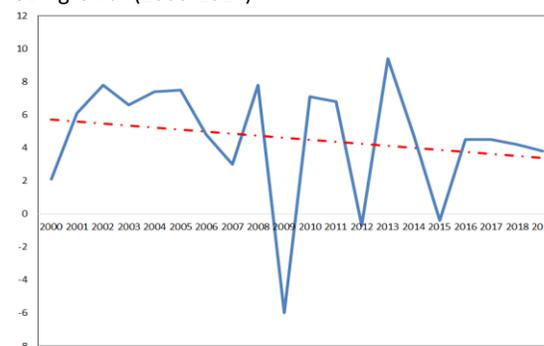
Moldova, one of the poorest countries in Europe, has experienced solid economic performance since beginning to enact reforms at the end of the 1990s. Since 2010, growth has averaged a respectable 4.5 percent, although from a relatively low base (Figure 1). However, these results fell substantially short of the 6 percent growth aspirations posited in the “Moldova 2020” strategy. More troubling, the economic dynamism evident in the early 2000s now seems to be waning.

The new incoming government faces the challenge of rekindling previous growth momentum and accelerating the pace of job creation. Jobs are a concern because young, productive workers are leaving at an unusually rapid rate to seek work and fortune elsewhere. Moldova has already lost population over the last two decades, and if current trends continue, Moldova will lose another fifth of its population by 2050. While this exodus has brought with it a reflow of remittances that are among the largest in Europe, these cannot be depended on to sustain growth in coming decades.

The good news is that Moldova has some assets that can be harnessed to this task. First, its geographic location between East and West can be converted into a source of comparative advantage in trade. Not only does Moldova already produce exports for sale both to the European Union (EU) and Commonwealth of Independent States (CIS), it also provides transport and other services to bridge the geographic divide. Second, the country has already shown that it can produce differentiated products and services. It is known for its wine, and its agribusinesses could, with investments in new technologies, become a driver of growth. Information and technology services, still incipient, are also expanding rapidly. The recent success of its Free Economic Zone (FEZ) has shown that when the policy regime is conducive to business and when infrastructure obstacles are overcome, businesses see Moldovan workers as productive employees. For instance, in the space of a few years, employment in the FEZ almost doubled. Extending the customs and the business-facilitation institutions and policies of the FEZs to the rest of the country might well unleash new forces of growth.

**Figure 1. Growth has been solid – if volatile and losing momentum**

GDP growth (2000-2017)



Source: World Bank Staff based on World Bank, World Development Indicators and WEO database

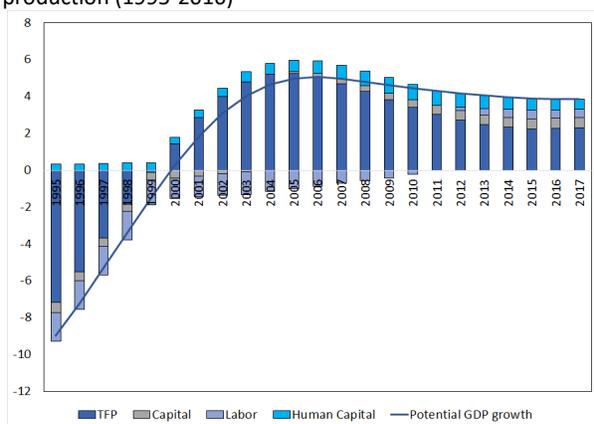
### Sources of Lost Growth Momentum

So why has growth slowed? A central part of the story is decelerating growth in total factor productivity (TFP) – the way firms and the economy as a whole combine labor and capital into ever more efficient uses (Figure 2). Dissecting supply-side productivity trends reveals that while labor is migrating toward higher productivity activities from agriculture, productivity growth *within* sectors is slow and *firm-level* productivity typically associated with innovation is not improving. A principal reason, explored in Chapter 1, is that the size of government for its level of income is unusually large in Moldova, absorbing a large amount of resources from the private sector that could otherwise go into high-productivity private investment. In 2016, with expenditures amounting to nearly 36 percent of Gross Domestic Product (GDP), the size of the government in Moldova was nearly 8 percentage points larger than in other countries of its income level (Figure 3).

Moreover, state enterprises still dominate the productive sector (Figure 4) – and these have much lower productivity levels and growth than their nonstate counterparts (Figure 5). Foreign firms in particular have productivity levels more than 80 percent greater than state enterprises. With less productive firms, Moldova is less able to compete in foreign export markets. Therefore, while trade shares occupy a substantial share of GDP, the country's exports are growing more slowly than those of other Eastern European countries. Changing the *industrial organization* -- diminishing the role of less-productive state enterprises and increasing the role of more-productive private companies, especially with respect to foreign investment -- is a first priority (Figure 6).

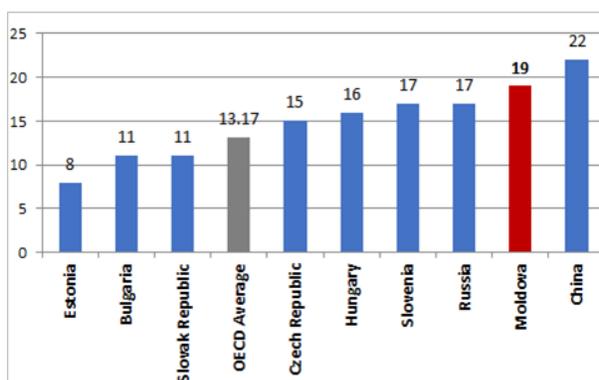
**Figure 2. Total Factor Productivity growth starts to disappoint...**

Decomposition of potential GDP growth by factors of production (1995-2016)



**Figure 4. ...with several sectors are characterized by the significant presence of State Owned Enterprises (SOEs)...**

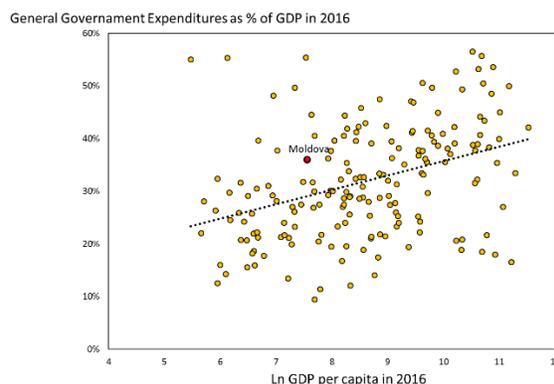
Number of sectors with SOEs (Product Market Regulation Indicator), (various years)



Source: World Bank Staff calculations based on PENN World Tables until 2014(a); IMF WEO and World Bank WDI databases (b); OECD-WBG Product Market Regulation indicators (c); Moldova National Statistical Bureau administrative data (d)

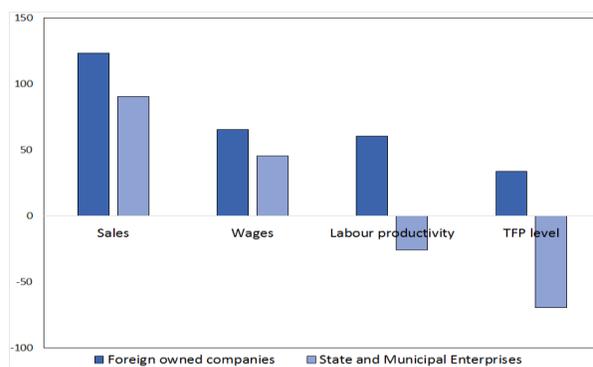
**Figure 3. ...And Moldova has a very large government relative to its income...**

General Government Expenditure as % of GDP and Log GDP per capita in 2016



**Figure 5...which have been a drag on productivity particularly when compared to foreign owned firms...**

Average percentage differences relative to private domestic firms in the economy (2010-2016)



A second priority is changing the *incentives* external to firms that drive productivity. Among these, *competition* and *taxes* are particularly important. Competition can be a powerful driver of productivity

growth. Only 41 percent of manufacturing markets are workably competitive, according to survey data;<sup>4</sup> the remainder are monopolies or shared monopolies (Figure 7). Chapter 3 presents compelling evidence that firms in markets with lower intensity of competition have slower productivity growth, controlling for other factors. Firms in industries with minimal competition have limited incentives to innovate, to use resources more efficiently, or to seek out new export markets. If price-cost margins markets were to become 10 percent lower in manufacturing – a proxy for increased competition intensity – estimates in Chapter 3 suggest that labor productivity growth would be 5.1 percent greater (all else being equal).

Figure 6...Yet FDI inflow have stagnated in recent years...

Total FDI Inflows: Moldova vs. Comparators (2000-2016)

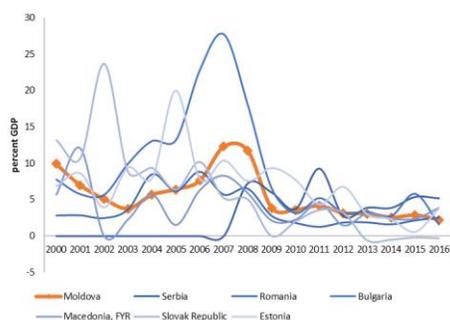
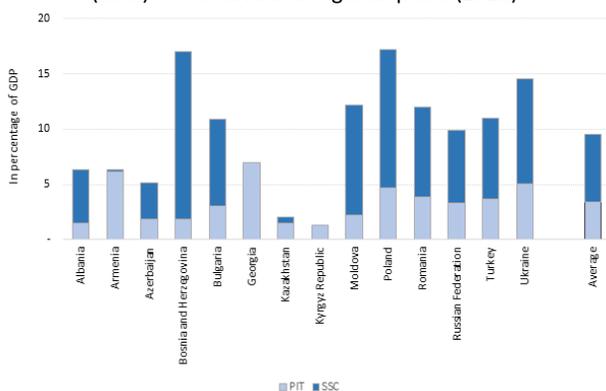


Figure 8. Productivity is also affected by high tax on labor which distorts input choices at the firm level...

Personal Income Tax (PIT) and Social Security Contributions (SSCs) in Moldova and regional peers (2015)



Source: World Bank Staff calculations based on FDI Snapshot using UNCTAD (a); World Bank Enterprise Survey (f); IMF Revenue Database (g); and Rutkowski, Levin, and Bargo based on LFS 2016.

Figure 7... while more than half of all manufacturing markets are monopolies, duopolies or oligopolies

Manufacturing sector market structures for Selected Countries

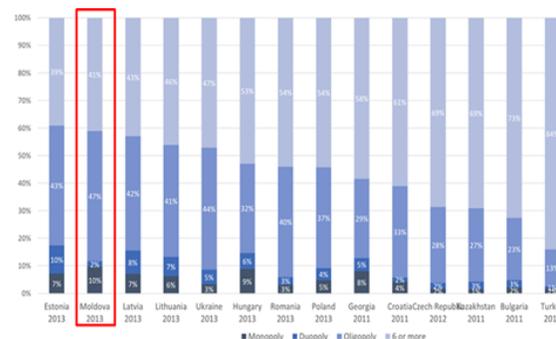
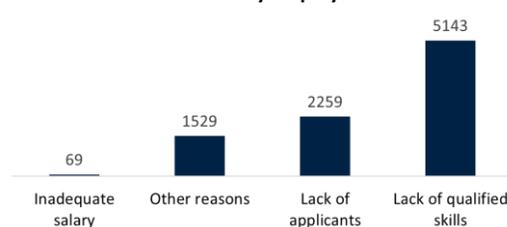


Figure 9...And by the skills mismatch reported by employers

Reasons why about a quarter of jobs were not filled by employers



Tax policy has also created perverse incentives that discourage productivity growth. Two channels are important. The first incentive is that the tax system taken as a whole, although capable of mobilizing substantial resources, is biased against employment and capital accumulation. High labor taxes – amounting to about 22.5 percent of wages – reduce the incentives of employers to create jobs (Figure 8). Yet reducing the burden of labor taxes would require finding alternative sources of revenue, including enhancing overall tax compliance and enforcement, as well as discontinuing the tax-free setting in social

<sup>4</sup> Calculations based on World Bank Enterprise Survey (See Chapter 3).

contribution treatment (which, in effect, goes against the international practice). At the same time, low taxes on consumption discourage savings. During 2000-17, the collection from the main income taxes (PIT and CIT combined) was trending up while consumption-based tax revenues represented by the combined VAT and excise were trending down. A second perverse incentive is that the system of poorly-designed tax incentives undermines productivity growth in multiple ways. First, these incentives are costly, and because results of these expenditures are not monitored against specific objectives, some portion is wasted. Moreover, these lost taxes have to be made up in other ways. Because Moldova has multifarious tax incentives for a myriad of purposes, they direct resources in scattershot directions, with little discernible strategic coherence. Tax concessions have been awarded to agriculture, the automotive industry, information and communication technology (ICT), renewable energy, and textiles and footwear, as well as for production in specific locations or purposes such as employment generation. Finally, some portion of tax incentives form part of the state aid going to support state enterprises, with their lower level of productivity, which results in keeping some unproductive firms in the market that would otherwise exit and giving other state firms a competitive advantage over their more productive private counterparts. The combined effect of the tax system is thus to dampen productivity growth.

A final priority to redress low growth in productivity is human capital. In 2017, Moldova's ranking in the World Bank's Human Capital Index was higher than what would be predicted for its income level, and the country has shown some improvement in recent years.<sup>5</sup> Still firms report a mismatch between job requirements and skills development (Figure 9). For this reason, the first priority of the "Moldova 2020" Plan's seven-pillar strategy was to align "the education system to labor market needs in order to enhance labor productivity and increase employment in the economy" and the "Moldova 2030" Plan includes among its priorities the need to "ensure quality education for all and promote life-long learning opportunities." But the higher education system of Moldova is in crisis. It has lost half of its enrollment in the past decade, as a combined result of aging population and high level of outmigration. It is struggling to recruit young professors and attract fee-paying students. It has never been high on the government's innovation agenda, unlike what happens in countries interested in developing their knowledge economy, such as the Nordic European countries and many East-Asian nations. The higher education system remains the only education sector without significant structural changes and support for reforms, unlike those of general education and technical and vocational education and training (TVET).

## **Policies to Propel Growth**

Returning to the 6 percent growth plateau achieved in the immediate post-2000 period is, while challenging, a real possibility. Achieving this objective is essential if Moldova is to catch up with the rest of Europe. But doing so requires policy initiatives that will boost productivity and create a more dynamic private sector. These initiatives include reforming the enterprise system and the incentives external to the firm, namely in the competition framework and the tax system, and also creating a better supply of skills in the labor market.<sup>6</sup>

Policies to accelerate growth can be thought of as operating at three levels: The first level involves macro policies to ensure that the investment climate is conducive to private sector growth. These include, for example, maintaining macroeconomic and financial stability, protecting property rights, and improving

---

<sup>5</sup> Between 2012 and 2017, the value on the World Bank's Human Capital Index for Moldova increased from 0.56 to 0.58. Children in Moldova can expect to complete 11.8 years of preprimary, primary, and secondary school by age 18; however, when years of schooling are adjusted for quality of learning, this is equivalent to 8.2 years.

<sup>6</sup> See policy matrix below. Some of these reforms aim at addressing implementation gaps.

the efficiency and probity of public finance. These have been the subject of other reports.<sup>7</sup> A second area, centered on the enterprise sector, concerns the organization of production, particularly policies toward state enterprises and foreign investment. The third level involves incentives external to the enterprise that most directly affect the enterprise sector, particularly strengthening competition in markets and providing greater incentives implicit in the tax policy framework. In addition, policies to increase human capital and the skill levels of the workforce (arguably the most important input into the productive process) will be pivotal in the long run to increasing productivity.

## **Policies to unleash private enterprise**

### ***Reducing the size of government...while increasing its capabilities***

A major challenge is to progressively reduce the size of government but in ways that would improve its effectiveness while reducing its costs. In public finance, studies have shown that many comparator governments have achieved the same result as Moldova in education, health, and social protection, but at a much lower cost. Recommendations include: better targeting of social assistance, optimizing child education network financing, revamping the delivery system in the hospital network, reducing the number of public employees, and revising public procurement practices.<sup>8</sup> A series of other reforms to tackle long festering issues that hamper productivity of the enterprise sector, such as corruption, weak civil service, and a poorly functioning judiciary and prosecutor's service, would also improve the investment climate and spur growth.<sup>9</sup> These recommendations, together with the policy suggestions in this report, would improve the efficiency of public expenditures, as well as reduce the size of government, so as to create more room for the private sector to use resources otherwise channeled to government.

One area where the government has to increase its capabilities is in regulating the financial sector. The purpose of the financial system is to facilitate turning private savings into investment. At present, several issues impede this process. The large size of the government typically requires that its borrowings preemptively absorb a large percentage of potential investment finance. Reducing the government's borrowing requirement in turn requires enacting reforms in public sector management noted above.<sup>10</sup> A second set of reforms to increase its capability to regulate the financial sector are, as noted in the International Monetary Fund's (IMF) Recent Article IV Review, to complete the cleansing of the financial

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<sup>7</sup> See for example, World Bank, *Public Expenditure Review*, (2015); World Bank, *Public Finance Review (2016)*; IMF, Republic of Moldova Article IV Consultation (December 2017).

<sup>8</sup> These are elaborated in World Bank, *Moldova Public Finance Review* (Washington, DC: World Bank, 2016). A new public procurement law became effective on May 1, 2016. While it provides a satisfactory regulatory framework incorporating fundamental EU principles, certain provisions are not fully compatible with EU requirements and will require further amendments. Procurement in defense and utilities remains unregulated, and the legal framework governing concessions and public-private partnerships requires revisions and alignment with relevant EU legislation. The new law brought major changes in the process of resolving public procurement complaints, including the creation of the National Complaint Settlement Agency in September 2017. Ongoing reform efforts by the Ministry of Finance, including the establishment of an e-procurement system, are supported by the EU and other donors. The Ministry of Finance further elaborated a strategy and action plan for the development of public procurement systems. The strategy and action plan were approved by the government in December 2016 and aimed at implementing the provisions of the EU-Moldova Association Agreement and World Trade Organization Government Procurement Agreement.

<sup>9</sup> For greater specificity, see World Bank, *Justice Sector Public Expenditure and Institutional Review*, (2018), which provides key recommendations in this area which are summarized in Box 5.

<sup>10</sup> See World Bank Group, *Moldova Public Finance Public Finance Review* (Washington: DC, 2016).

sector that was begun in the wake of the 2015 financial crisis.<sup>11</sup> The reform program of the government is widely seen as sound, although program implementation is still underway. The program includes several elements: increasing transparency in ownership and management, and strengthening supervisory and regulatory frameworks. Issues remaining include resolution of ownership transfers, managerial certification, continued resolution of banks' balance sheets, and improvement in the bank's risk management procedures for allowing effective financial intermediation. A third task as part of improving risk management and recapitalizing the banking system is to reduce the number of nonperforming Loans (NPLs). Accomplishing this, together with injecting some cross-border competition, would ultimately have a positive effect on bringing down spreads.

### ***Reforming state-owned enterprises***

Creating a dynamic enterprise sector requires reforming the state-owned companies (SOE). A legacy of the Soviet era, these companies dominate the productive landscape to a far greater extent than in virtually all other modern Eastern European countries. SOEs account for about 50 percent of all fixed assets – and have employment and sales shares more than twice the average of other Eastern European countries.

Because their productivity levels and TFP growth drag down the productive sector, the government might consider four inter-related reform measures:<sup>12</sup> (i) adopting an explicit ownership rationale and ownership policy; (ii) strengthening both the policy-making functions and ownership roles by separating these functions; (iii) improving incentives for better performance through governance reforms; (iv) creating a level playing field in the sectors supplied by SOEs; and (v) accelerating the program of divestiture in sectors producing private goods and services. Efforts to achieve these objectives include:

- *Define for each enterprise and state-dominated subsector an explicit rationale objective for the enterprise.* This could be incorporated into a comprehensive data base. This could include establishing a system to identify and cost-out public policy objectives that are assigned to SOEs as part of their mandate, continuing the implementation of the recent requirement for SOEs and joint-stock companies (JSCs) to publish International Financial Reporting Standards (IFRS)-based financial statements, and ensuring that these SOEs are subject to the same high-quality accounting, disclosure, compliance, and auditing standards as listed companies.
- *Separate policy making and ownership.* Over the medium- to long- term, line ministries should be responsible for policy, and the ownership function should be in the hands of a professional and specialized central body that oversees most state enterprises,
- *Revamp governance arrangements for SOEs.* This could include establishing clear guidelines for line ministries and agencies on how information is passed from the owner to SOE board members, and clarifying the responsibilities of boards and management in order to avoid political interference in daily management. Moreover, developing and publishing individual SOE's performance results and making public evaluations of enterprises would improve accountability of SOE boards and management. Over the medium- to long- term, the program should entail developing a SOE performance-monitoring system, including performance agreements with each SOE, and covering key financial and nonfinancial performance indicators.
- *Consider accelerating a program of divestiture.* The government has recently privatized the national airlines with the objective of staunching losses and improving customer service. Selling more state

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<sup>11</sup> See IMF *Republic of Moldova Article IV Consultation and Second Review under the Extended Fund Facility* (Washington, DC: December 2017). Many of these same issues are covered in greater depth, if without benefit of including recent reforms, in World Bank-IMF *Moldova Financial Sector Assessment* (Washington: DC, December 2014).

<sup>12</sup> The first three of these were fully elucidated in the World Bank's report on SOEs (2017); this section draws on that report.

enterprises would have the objective of giving new owners/managers the incentive to earn a return in the market and to innovate and adopt new technology and organize production in order to increase productivity. It would allow the government to progressively free itself from a large stream of transfers and to recoup capital that could be better used to recapitalize the social security system and pay-down the national debt. If done properly it could also accelerate the entry of foreign companies that bring new technology, management practices, and access to export markets. To be successful, a privatization program has to be transparent, competitive, and must ensure that newly privatized companies operate in workably competitive markets without preferential access to state resources. Indeed, “investors have complained that the privatizations are unfair and lack transparency.”<sup>13</sup>

- *Progressively promote competitive neutrality and a level playing field in the sectors supplied by SOEs.* This can be accomplished by removing discriminatory regulations and allowing for other market players and potential entrants to compete on equal terms. The effective implementation of state aid rules that prevent undue discrimination between market players and that minimize competition distortions is a key element of this process, and tax incentives and budget transfers should be carefully audited and applied in line with the current state-aid controls.

### ***Promoting foreign direct investment...***

Increasing the role of foreign direct investment would help raise productivity levels in the economy. Not only are foreign firms more productive, they generally bring with them access to foreign markets and more advanced technology, elevating the pace of productivity increases in the economy as a whole. Moldova has not realized its full potential to attract foreign direct investment or used FDI as a vehicle to drive private-sector development and exports. While the country has become progressively open to FDI since 2000, the high rates of inflows evident in the first decade have slowed since reaching their peak in 2008. Moreover, Moldova has been less successful in attracting new investment than its neighbors and other comparator countries.

Five policy initiatives, elaborated in Chapter 2, could begin to harness the full transformative power of FDI. First, the government could *develop a more robust strategy* to attract more FDI by widening the scope of its access to new activities, particularly through expanding the privatization initiative already underway. Second, the government could *upgrade its investment promotion office*, now understaffed and underutilized by FDI, either before or after entry. Third, the government could *evaluate and adjust tax incentives* to increase their effectiveness as a high priority because at present the costs to the Treasury do not appear to be having the pay-off they otherwise might. Fourth, the government could *strengthen investor protections* by reducing opportunities for corruption, regulatory takings, and sudden changes in the rules of the game that discourage many investors and that have generated appeals to dispute resolution under bilateral investment treaties. The government could identify and remove existing barriers that discriminate against foreign investors. These include, for example, obstacles that affect land use. Finally, the government could *develop sophisticated supplier development programs* to link up Moldovan enterprises with foreign companies, particularly exporters and firms in the FEZs. These could promote vertical spillovers through dissemination of technologies and international standards. Policies such as these could rekindle investor interest and result in FDI leading private sector growth.

### ***...while promoting exports***

*Maintain open trade and investment policies so as to deepen integration with the EU and with the CIS.* The trade regime could be improved by cutting remaining tariff peaks in some products, such as wine

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<sup>13</sup> See <https://www.export.gov/article?id=Moldova-State-Owned-Enterprises>

bottles, and eliminating restrictions on trade in services, particularly in the form of barriers to mobility of high-skilled workers, which could be hindering technological and managerial upgrading. Widening export markets by working to realize the promise of the Deep and Comprehensive Free Trade Area (DCFTA) through full implementation, and at the same time negotiating new free trade areas (FTAs) with new partners, would contribute to export growth. *Upgrade quality and standards of exports.* This could be done by progressively replacing national standards with EU and international standards, strengthening the National Food Safety Agency, and developing and accrediting national sanitary and phytosanitary (SPS) laboratories. This could be coupled with raising awareness of the implications of the DCFTA and the requirements of EU markets in specific sectors and regions.<sup>14</sup>

*Improve logistics and infrastructure,* especially to link areas in which firms agglomerate to the global marketplace. While the country is implementing several major trade facilitation and operational reforms and also improving custom procedures, the success of the FEZs shows the power of modernizing and streamlining customs procedures, and these could readily be applied to the rest of the country. Establishing well-defined rules for investment approvals, for granting import and export licenses, and for streamlining and accelerating customs procedures could help all firms. Similarly, establishing one-stop-shop services on trade with publicly accessible and monitoring elements would markedly open the economy to exporters.

The FEZs could contribute more to national development if the government encouraged domestic linkages to export platforms. This could take the form of providing incentive mechanisms, encouraging the development of domestic suppliers, facilitating training of workers, identifying priority sectors, and helping domestic companies link with investors in the zones through supply chains or subcontracting.

### **Changing incentives to foster enterprise productivity**

Policies that shape incentives external to enterprises can help drive productivity increases. Addressing the shortcomings in the external incentive environment requires spurring competition, revamping incentives implicit in the tax system, and improving workers' skills.

#### ***Competition and product market regulation***

Surveys of private firms reveal that Moldova's environment poses substantially higher operational risks than other Europe and Central Asia (ECA) countries. These risks emanate from the combination of the anticompetitive practices of market players and restrictive state policies, such as discrimination against foreign companies, price controls, and distortive state aid that gives state enterprises a competitive advantage. State enterprises have near-monopoly positions in virtually all basic infrastructure services (electricity, water, and road construction); dominant positions in sectors that have been opened to private competition in most other countries (telephony, mobile services, Internet provision, and transportation services); and leading positions in several manufacturing sectors (for example, pharmaceuticals, wine, and glass bottling). Removing barriers to entry currently present in some of these markets, especially those with inefficient state enterprises, would generate substantial productivity gains for the country.

Several policies, elaborated in Chapter 3, could spur competition. A first priority is to improve the quality of data available to analyze market dynamics and regulatory constraints affecting key markets. A second priority is to review the rationale of existing legal monopolies and markets dominated by state enterprises to look for ways to increase competition. In some cases, this can be done at one segment of the industry

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<sup>14</sup> The World Bank IFC project on enhancing agriculture competitiveness focuses among other things on this dimension.

(for example, electricity generation and importation); in other cases, this may entail reducing policy restrictions on entry (for example, telecommunications). Improving the provision of backbone services through the progressive liberalization of key utilities and the introduction of pro-competition regulations would, if the experience in other countries is any guide, lead to improvements in efficiency and redound to downstream improvements in efficiency. A third priority is creating a neutral playing field across the economy, particularly in those industries where state firms compete with private firms. An important way to do this is to progressively curb budget transfers and tax incentives that favor SOEs and that are prejudicial to market competition. This would allow competition to drive out less-productive firms and raise overall productivity levels. It also requires eliminating SOE inspired barriers to new entry and import competition (for example, licenses). This includes market-by-market analysis of import restrictions in the form of tariff and nontariff barriers that restrict competition with imports. Moreover, price controls have been counterproductive, according to the evidence described in Chapter 3, and have led to higher, not lower, prices for certain food products. Narrowing the scope of price controls by clarifying their social objectives and exploring alternative options to achieve those objectives would open some new product markets to competition. Finally, the Competition Council could better enforce otherwise solid anticompetition legislation if a few amendments were made to it (for example, raising maximum fines) and if the staff were encouraged to focus resources on the most harmful restrictive business practices, such as cartel behavior, that adversely affect consumers.

### ***Tax policy***

The tax system in Moldova, as noted, is riddled with different rates, exemptions, deductions, and tax credits that create cross-currents of differing incentives to the enterprises in the economy. Most incentives are associated with reductions in Value Added Tax (VAT) and excise tax obligations. The tax system favors capital over labor, consumption over savings, and large firms (that have bureaucratic and political access) over small firms.

These distortions are best corrected through a *systematic review of the entire tax system*. This would include *making improvements in tax administrations to improve the efficiency of the system; streamlining taxes on income, wealth, and social security; improving the VAT and excise regime; and reviewing the panoply of tax incentives - evaluating them against stated objectives* – with the goal of progressively phasing them down and replacing them with a less costly, more focused, and administratively clear system.

Reducing the distortionary effects of tax incentives and their costs while improving their effectiveness could be accomplished with several measures aimed at their rationalization:

- Introduce policy objectives for each incentives program and conduct a cost-effectiveness assessment of incentives, with a view toward gradually phasing down all incentives. This would involve a calculation of the cost in foregone tax revenues and/or budget expenditures, as well as expected benefits (in jobs, investment and/or exports).
- Ensure that all tax incentives are time-bound and have sunset clauses so that supported activities have a target time to achieve complete commercial viability.
- Target incentives based on investment or other measurable performance measures rather than profits. This means replacing tax holidays with merit-based incentives like investment allowances, tax credits, and/or accelerated depreciation.

- Improve transparency and accountability, and require an annual review of all incentive programs to be incorporated into the national budget as tax expenditures, together with progress reports on effectiveness.
- Increase accessibility for all firms, irrespective of size, for the supported activity by clarifying the requirements and procedures to obtain incentives.

***Improving workers skills and increasing human capital: education***

For a country like Moldova with limited natural resources and a small market, the contribution of the higher education system to economic diversification and growth is of special importance.

The policy challenge is to improve the contribution of higher education to skills development and technology transfer and to put in place a long-term sustainable financing strategy. This includes a number of steps. First, actions must be set in motion to *improve the teaching and learning outcomes of universities* (via introduction of modern curricular and pedagogical innovations and by introducing hiring mechanisms that utilize meritocratic recruitment and promotion processes based on objective measures of academic achievement). Second, *linkages between the productive sectors and the regional economy must be strengthened* by: setting up a labor market observatory tasked with collecting, analyzing, and publishing the employment results of all graduates; helping universities in setting up their own incubators or in linking up closely with the industrial parks under development; and getting employers involved in designing curriculum and having them hire students. Third, *long-term financing sustainability must be ensured* by, on the one hand, mobilizing sufficient resources through encouraging consultancy opportunities for professors and donations, and on the other hand, through ensuring an efficient allocation of resources across universities. The latter requires *implementing a three-pillar funding model that would encourage higher performance and innovation throughout the entire higher education system*.

\* \* \*

The policy agenda facing the new incoming government is large (see Annex 1 below), and redirecting the growth trajectory toward a high path of sustained economic expansion and job creation will not be easy. Creating a new economic program to raise the productivity of the enterprise sector will require careful thought, planning, and coordination, as well as persistence in implementation. But Moldova has resources and many opportunities, so the new government is well positioned to confront the challenge of reinvigorating income growth and providing attractive jobs for the coming generation of Moldovans.

### Annex 1: Policies to Propel Growth: Policy Matrix

#### Policies to Unleash Private Enterprises (see Chapters 1 and 2)

<p><b>Reduce the footprint of government and increase its capabilities</b></p>	<p><i>Continue to improve the efficiency of public spending:</i> Follow the recommendations made by the World Bank Public Finance Review (PFR) (2016), and if needed, conduct a fully-fledged Public Expenditure Review. This includes:</p> <ul style="list-style-type: none"> <li>• Optimize the primary and secondary education network, and expand formula financing to other education subsectors</li> <li>• Optimize the hospital network</li> <li>• Reinforce procurement practices</li> <li>• Better regulate public capital investment</li> </ul> <p><i>Reform the financial sector, including:</i></p> <ul style="list-style-type: none"> <li>• Complete the cleansing of the financial sector (increase transparency in ownership and management; and strengthen supervisory and regulatory frameworks).</li> <li>• Develop necessary tools for debt resolution (including revisiting the 2012 Insolvency Law) to reduce NPLs</li> </ul>
<p><b>Reform state-owned enterprises</b></p>	<p><i>Reduce excessive SOE footprint and increase transparency and accountability</i></p> <ul style="list-style-type: none"> <li>• Map SOEs at the market level, including their commercial and noncommercial activities, and consolidate all available registries to improve transparency and accountability</li> <li>• Provide a clearer definition and clearer legal regime of SOEs; including in relation to the separation between ownership, management, and regulation</li> <li>• Improve clarity, consistency, and transparency of current SOE registry</li> <li>• Accelerate program of divestiture</li> <li>• Ensure that the privatization program is transparent and competitive</li> </ul> <p><i>Improve SOE management and regulations</i></p> <ul style="list-style-type: none"> <li>• Separate commercial and noncommercial activities of SOEs, and improve transparency in the provision of state aid</li> <li>• Deepen implementation of reforms on streamlining SOE management, ensuring there is no overlap between ownership, management, and sector regulation (for example, railway sector)</li> <li>• Ensure regulatory neutrality by applying corporate law to all market players, both public or private and ensure that there are no differences between joint stock and public companies when offering commercial goods and services</li> </ul>
<p><b>Promote Foreign Direct Investment</b></p>	<p><i>Update investment strategy and strengthen MoE's investment policy capacity</i></p> <ul style="list-style-type: none"> <li>• Conduct an FDI sector scan to identify new niches for investment promotion with higher technology and skill content, and linkages potential; Identify good practices and lessons learned from FEZ regime and develop an action plan for roll-out to the whole economy</li> <li>• Strengthen MoE department in charge of investment climate and policy by adding new staff and training them on key topics in FDI policy analysis, development, and monitoring and evaluation</li> </ul> <p><i>Upgrade investment promotion:</i></p> <ul style="list-style-type: none"> <li>• Establish board and governance practices and key internal procedures at the Investment Promotion Agency</li> </ul>

	<ul style="list-style-type: none"> <li>• Adopt a new 3-5-year corporate plan that sets explicit and quantifiable impact objectives that relate directly to Moldova’s priority FDI sectors and subsectors</li> <li>• Develop and institutionalize key investor services</li> </ul> <p><i>Strengthen investor protection and reduce barriers to foreign entry:</i></p> <ul style="list-style-type: none"> <li>• Map existing investment protection mechanisms and channels available to investors, and assess their effectiveness</li> <li>• Develop investor aftercare services at the new Investment Agency to monitor and address a range of investment climate issues encountered by investors</li> <li>• Designate an appropriate agency in the government to systematically track more serious investors’ grievances and identify their source, cost, and impact on investment lost</li> <li>• Pilot a Systematic Investor Response Mechanism at this agency: to identify specific patterns and origins of government conduct generating political risks; to measure affected investment as “evidence” to advocate for timely changes and resolutions of issues; and to strengthen capacity in relevant institutions to minimize the recurrence of these events</li> <li>• Identify barriers to land use and conversion by foreign companies</li> </ul> <p><i>Improve FDI Linkages to the local economy:</i></p> <ul style="list-style-type: none"> <li>• Conduct a demand-supply gap analysis and define approach to promoting FDI linkages</li> <li>• Design and implement a targeted supplier development program in a pilot sector</li> <li>• Develop a supplier database and matchmaking services</li> <li>• Launch a targeted investment promotion campaign to attract international suppliers in the sector</li> </ul>
<b>Promote exports</b>	<p><i>Upgrade quality and standards of exports</i></p> <ul style="list-style-type: none"> <li>• Progressively continue replacing national standards with EU and international standards</li> <li>• Continue to strengthen the National Food Safety Agency</li> <li>• Develop and accredit national SPS laboratories</li> </ul> <p><i>Improve the trade regime:</i></p> <ul style="list-style-type: none"> <li>• Cut remaining tariff peaks</li> <li>• Eliminate restrictions to trade in services, particularly in the form of barriers to mobility of high-skilled workers</li> </ul> <p><i>Improve the provision of backbone services</i></p> <ul style="list-style-type: none"> <li>• Continue progressive liberalization of key utilities and introduction of pro-competition regulation, including eliminating legal monopolies, and unbundle services to open markets (for example, railways, post)</li> </ul> <p><i>Improve logistics and infrastructure</i></p> <ul style="list-style-type: none"> <li>• Streamline and accelerate customs procedures for all firms</li> <li>• Establish one-stop-shop services on trade with publicly accessible and monitoring elements</li> </ul>

<b>Changing incentives to foster enterprise productivity (see Chapters 3, 4, and 5)</b>	
<b>Foster competition and reduce the restrictiveness of product market regulation</b>	<p><i>Limit price controls and other anticompetitive restrictions</i></p> <ul style="list-style-type: none"> <li>• Consider replacing margin/price controls of staple foods/pharmaceuticals with less restrictive measures, for example with vouchers for staple goods to vulnerable populations, allowing private players to compete for the market</li> <li>• Reassess the methodologies used to control prices and margins of fuel</li> <li>• Remove restrictions to participation in markets, such as burdensome requirements to import, wholesale and retail in various sectors (for example, pharmaceuticals and fuels)</li> </ul> <p><i>Strengthen antitrust enforcement and advocacy</i></p> <ul style="list-style-type: none"> <li>• Focus competition enforcement on the fight against the most pervasive anticompetitive practices, notably cartels that affect consumer welfare and abuse of dominance, and evaluate resources allocated to merger review and unfair competition</li> <li>• Increase the level of fines (amend legislation to increase maximum fines from 5 percent to 10 percent of total turnover in the previous business year)</li> <li>• Improve checks and balances within the Competition Council (amend legislation or issue regulation to clarify the independence between prosecutorial and adjudication bodies within the Competition Council)</li> <li>• Promote advocacy to embed competition principles in other government policies and regulations</li> </ul> <p><i>Streamline State Aid policy implementation</i></p> <ul style="list-style-type: none"> <li>• Improve availability of public information on state aid, including on the state aid beneficiaries – particularly in the case of SOEs</li> <li>• Rationalize the use of state aid in the economy, bringing it closer to EU practice</li> <li>• Align existing state aid with the state aid regulation, including fiscal aid in FEZs</li> <li>• Reinforce the use of horizontal aid schemes and reduce the use of sector specific and individual aid</li> <li>• Move away from state aid provided through budget revenue waivers (for example tax benefits) to aid provided through budget expenditures</li> </ul>
<b>Ensure that the tax policy structure is pro-growth</b>	<p><i>Adjust the revenue structure away from factors of productions towards indirect taxation, including following actions:</i></p> <p><i>Streamline taxes on income, wealth, and social security:</i></p> <ul style="list-style-type: none"> <li>• Improve the wealth tax to restore progressivity and mobilize revenue following the introduction of the flat rate tax (including modifying the wealth tax so that the taxable property does not have to meet the dual conditions of exceeding the value threshold as well as the minimum area requirement)</li> <li>• Ensure that the contributions to social security and its distribution are brought under taxation either at the time of making contributions or receiving distributions</li> </ul> <p><i>Strengthen the VAT and Excise tax regimes:</i></p> <ul style="list-style-type: none"> <li>• Reduce the number of VAT rates to improve administration and compliance</li> <li>• Reduce number of VAT exemptions and zero-rated goods not justifiable (such as those on gambling, passenger and transportation services, cars and other motor vehicles, dormitory accommodation and utilities, and services delivered by agricultural cooperatives)</li> </ul>

	<ul style="list-style-type: none"> <li>• Increase the excise rates for tobacco and petroleum fuel products</li> </ul> <p><i>Evaluate and adjust business related tax expenditures</i></p> <ul style="list-style-type: none"> <li>• Introduce clear, specific, measurable, actionable, realistic, and time-bound policy objectives for each incentives program, and conduct a cost-effectiveness assessment of incentives</li> <li>• Introduce legislation mandating regular review of all incentive programs</li> <li>• Target incentives based on investment or other performance measures rather than profits. This means replacing tax holidays with merit-based incentives such as investment allowances, tax credits, and/or accelerated depreciation. Tax incentives should, to the largest extent possible, be linked to investments made in capital, staff training, and research and development (R&amp;D), and tax holidays should be eliminated or used as sparingly as possible.</li> <li>• Increase transparency and accessibility of information on the requirements and procedures of investment incentives by developing, maintaining, and publishing a detailed and user-friendly inventory</li> <li>• Maintain and publicize a database of all the investment incentives granted to firms through different measures and mechanisms</li> <li>• Standardize and make consistent the interpretation of the tax provisions by the various authorities involved</li> <li>• Simplify incentive application procedures with automatic approval of tax incentives, with subsequent risk-based audits</li> <li>• Review export-contingent incentives in the FEZ in line with the World Trade Organization commitments</li> <li>• Correct discrepancies and fill gaps in the legislation in consultation with the entrepreneurs and make more specific provisions of laws and regulations governing taxation, customs procedures, land use, and so forth</li> <li>• In the longer term, gradually phase-out tax incentives</li> </ul>
<p><b>Improve Workers Skills and Increasing Human Capital: Education</b></p>	<p><i>Improve the relevance of teaching, learning and research:</i></p> <ul style="list-style-type: none"> <li>• Introduce curricular and pedagogical innovations (including by establishing teaching and learning centers; requiring all PhD candidates to get a teaching certificate before completing their doctorate; introducing e-learning approaches)</li> <li>• Reduce the amount of “academic inbreeding” (including by defining rules to limit the number of PhD graduates recruited directly after they finish their research degree, establishing promotion criteria that take into consideration the experience in foreign academic settings)</li> <li>• Offer incentives for the consolidation of internal quality assurance units in all universities</li> </ul> <p><i>Strengthen linkages with the productive sectors and the regional economy:</i></p> <ul style="list-style-type: none"> <li>• Set up a labor market observatory tasked with collecting and analyzing, and publishing the employment results of all graduates</li> <li>• Strengthen the capacity of stronger university in setting up their own incubators or linking up closely with the industrial parks under development)</li> <li>• Involve employers in curriculum design and having them take on students</li> <li>• Open the doors to firm representatives and organizing technology information and diffusion events</li> </ul> <p><i>Ensure a sustainable Financing Strategy for Higher Education:</i></p> <ul style="list-style-type: none"> <li>• Increase budget allocation to university by also encouraging consultancy opportunities and donation</li> <li>• Improve budgetary allocations across universities by placing a greater weight to performance-based mechanisms</li> </ul>

## Chapter 1. Moldova: Rekindling Economic Dynamism

Moldova, one of the poorest countries in Europe, has experienced solid economic performance since beginning reforms at the end of the 1990s. Since 2010, growth has averaged a respectable 4.5 percent, although from a relatively low base (Figure 10). In fact, the country has generally outperformed other comparators in the region (Figure 11). However, these results fell substantially short of the 6 percent growth aspirations posited in the “Moldova 2020” strategy that were designed to propel convergence toward European living standards.<sup>15</sup> More worrisome is that the economic dynamism evident in the early 2000s seems to have attenuated in recent years. Moreover, the otherwise salutary averages since 2000 mask deep-seated problems that must be addressed if Moldova is to shape for itself a more dynamic, prosperous future that leads to living standards closer to those found in neighboring countries.

One worrisome trend is demographics: its younger, most potentially productive citizens are leaving to seek work and fortune elsewhere. Coupled with slower birth rates, this means that out-migration has resulted in Moldova today having 4 percent fewer people than it had in 1990.<sup>16</sup> If current trends continue, by 2050 Moldova will lose another 20 percent of its population (Figure 13).<sup>17</sup> Moreover, the country is rapidly aging. The average age of the country has risen to about 38,<sup>18</sup> which is older than other parts of Europe. More than 17 percent of the population in the latest 2014 census were over the age of 60, and that share is rising. This in effect portends a substantial demographic tax in the form of declining domestic savings rates and rising pension expenditures.

The cloud of Moldovan out-migration does have a silver lining in the form of remittances. Workers abroad have been sending a share of their earnings home, and these flows – amounting to 25 percent of GDP on average during 2007-17 (Figure 14) – have supported a consumption-led growth pattern that is difficult to shift. In the past three years, remittances covered about a third of the trade deficit.<sup>19</sup> But to the extent that remittances support consumption rather than investment, they do little to propel economic growth. Indeed, the observed decline in poverty rates and rising prosperity have been largely supported by remittances and pension payments, which fueled a consumption-led growth model (World Bank 2016 Systematic Country Diagnostic). More important, as families become more and more separated, both in time and memory, these remittance levels are unlikely to be sustained.

This pattern of growth implies that the economy has failed to create jobs sufficiently enticing to attract its own youth to live and work in Moldova. Net job creation has been negative in virtually all sectors of the economy since the Great Recession of 2009-10 (Figure 12). Integration with Europe and the Commonwealth of Independent States (CIS), together with the lure of foreign living standards that are made ever more proximate by modern media connectivity has propelled an unparalleled outmigration that can only be reversed through a concerted government effort to create new opportunities in Moldova.

So, the challenge facing the new administration that will assume the reins of government in 2019 can be distilled into answering one question: how can the country create new sources of economic growth that will create a steadily expanding number of new jobs, and entice its most talented workers to seek opportunity at home rather than abroad?

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<sup>15</sup> Government of Moldova, *Moldova 2020: National Development Strategy – 7 Solutions for Economic Growth and Poverty Reduction*, (2012).

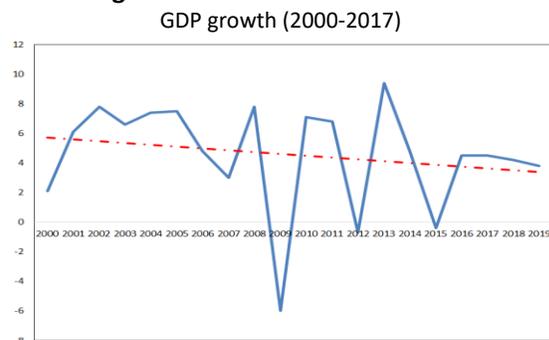
<sup>16</sup> Source: World Bank, World Development Indicators.

<sup>17</sup> Source: World Bank, Population projections. Estimates and projections between 2017 and 2050 are based on the 2004 census

<sup>18</sup> Source: Moldova National Bureau of Statistics.

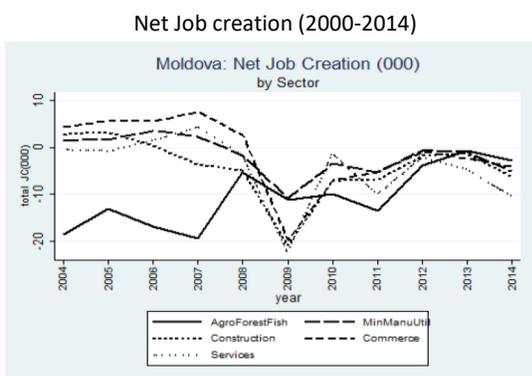
<sup>19</sup> Based on IMF (2018).

**Figure 10. Growth has been solid – If volatile and losing momentum...**



Source: World Bank, World Development Indicators and WEO database

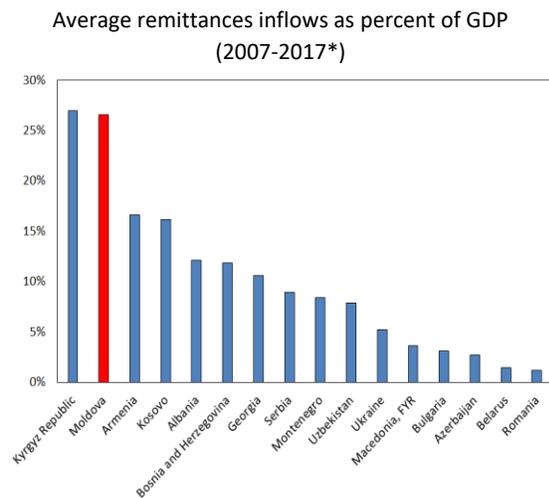
**Figure 12...but not sufficient to create jobs...**



Source: World Bank (2016a)

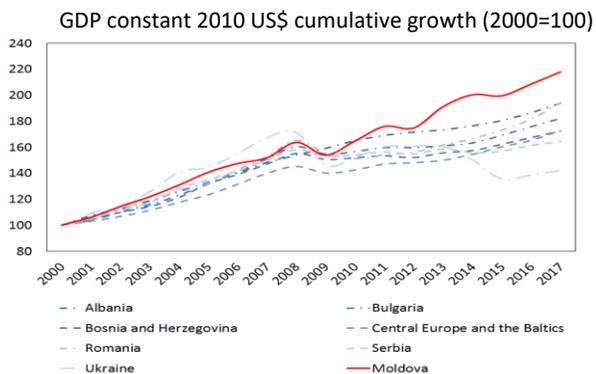
**Figure 14 ...so Moldova is reliant on remittances that support consumption but not investment**

...



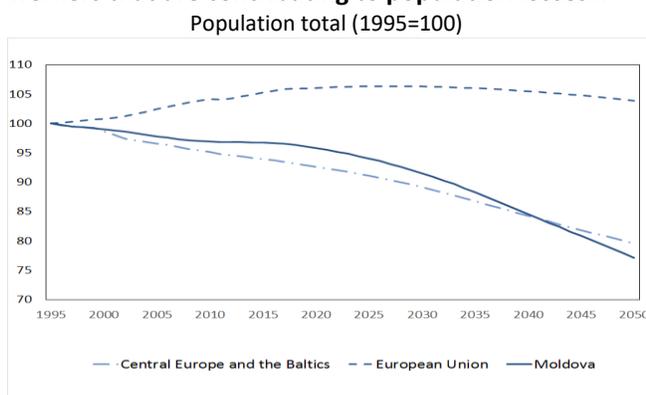
Source: World Bank Staff calculation based on World Bank, WDI

**Figure 11...and even better than regional comparators...**



Source: World Bank Staff calculations based on World Bank, WDI

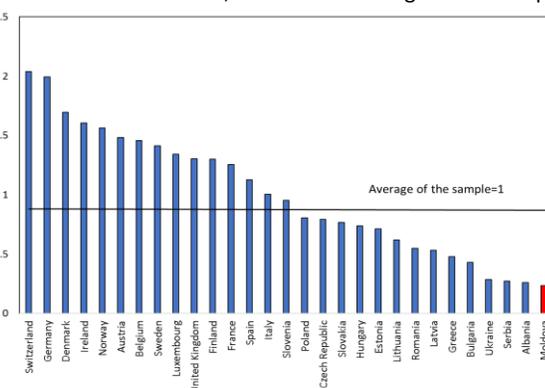
**Figure 13...and stem the steady outflow of young workers that are contributing to population losses...**



Source: World Bank, Population database

**Figure 15...while higher living standards abroad exert a strong pull from the Moldovan labor market**

Monthly average earning in manufacturing in 2016 in constant 2011 PPP USD, ratio to the average of the sample



Source: World Bank Staff calculations based on ILOstat. Note: when 2016 values are not available, values have been replaced with latest value available during the period 2013-2016. In case of availability of more than one survey, the highest value was chosen.

The good news is that Moldova has some assets that can be harnessed to this task. Its geographic location between East and West – in the past often an unfortunate disadvantage discouraging growth – can be converted into sources of comparative advantage in trade. Not only does Moldova already produce exports for sale both to the European Union (EU) and CIS, it also provides transport and other services to bridge the geographic divide. In 2017, exports stood at 42 percent of GDP.<sup>20</sup> Second, the country has already shown that it can produce differentiated product and services. It is known for its wine, and its agribusinesses could, with investments in new technologies, become a driver of growth. Information and technology services, still incipient, are also expanding rapidly. The recent success of its Free Economic Zone (FEZ) has shown that when the policy regime is conducive to businesses and infrastructure obstacles are overcome, businesses can see Moldovan workers as productive employees; in the space of a few years, employment in the FEZ has almost doubled.<sup>21</sup> Extending some of the key institutions and policies of the FEZs to the rest of the country, specifically those related to customs and business facilitation, might foster growth.

This chapter analyzes the elements shaping past growth performance and suggests policy remedies to overcome impediments and unleash growth that are based less on activity by the state and more on the private sector. The first section focuses on recent economic growth by dissecting supply side productivity trends. It locates the slowing growth dynamism in the declining contribution to growth of total factor productivity (TFP) – the way firms combine labor, capital, and technology in ever more efficient ways. While labor is migrating toward higher productivity activities from agriculture, productivity growth within sectors is slow, and firm-level productivity typically associated with innovation is not improving. A principal reason, explored in the second section, is that state enterprises dominate the productive sector and have markedly lower productivity levels and growth than their nonstate counterparts. The third section looks at the demand side of the economy and focuses on export performance, and finds that exports, while a substantial share of GDP, are underperforming relative to other Eastern European countries. But there is reason for optimism for the future: a few promising sectors are the subject of section four, and these could well form the basis of new economic growth. These include high value-added agriculture and related products, information technology, and manufacturing. But realizing the promise of these activities -- and boosting the productivity and performance of more traditional sectors -- requires policy changes that realign incentives to promote a more dynamic private sector. These include reforming the enterprise system and promoting greater entry of foreign direct investment; they also imply the need to reform the incentives external to the firm, namely in the competition framework, the tax system, and creating a better supply of skills in the labor market. The final section therefore lays out in schematic form policy options that could help redirect the Moldovan growth trajectory towards sustained dynamism, greater job creation, and more rapid catch-up with the rest of Europe.

## **Growth Performance: Drivers... and Drags**

### **Income gains around a declining trend**

Moldova's growth performance over the last twenty years has been volatile but the economy has been growing relatively rapidly. To be sure, its GDP was relatively small in 2000, about US\$1.3 billion. Over the last two decades, after the recession and reforms in the late 1990s, growth has averaged a respectable 4.6 percent. Because population was declining during this period, the per capita growth was somewhat higher. Unemployment has fallen rather steadily from the recession-induced high in 2009 of nearly 8

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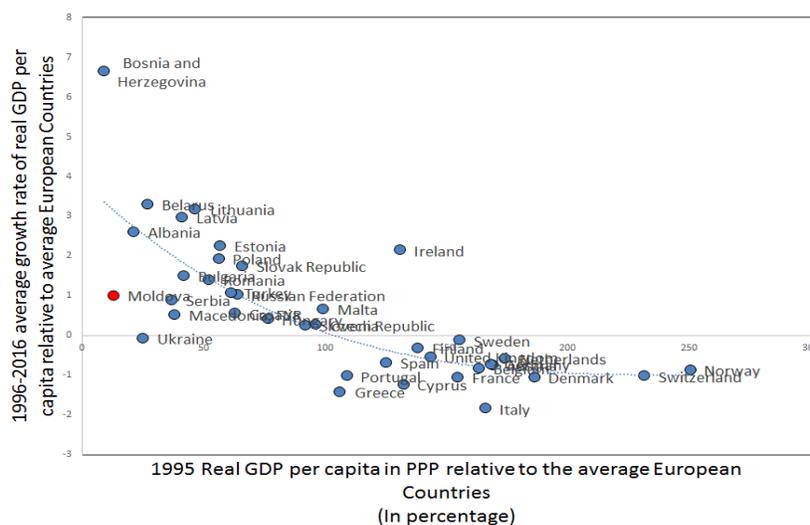
<sup>20</sup> Source: World Bank, World Development Indicators.

<sup>21</sup> World Bank (2015a) 28.

percent to about 4 percent at the end of 2016. To be sure, recessions hit hard at several points after 2000 – in 2009 because of the Great Recession, in 2012 because of weather, and in 2015 because of the confluence of bad weather, bad relations with Russia, and a bad banking crisis. Were it not for these events, the country’s economic performance would have been commendable – and probably would have facilitated a net increase in employment.

The growth pattern from a long-term perspective reveals two problems: The first is the exceptional volatility of economic growth. Growth rates between 2010 and 2017 ranged from -0.7 percent (2012) to 9.4 percent (2013). Volatility undermines average growth because it reduces returns to investment, increases uncertainty, and makes business planning problematic. To a large degree, volatility emanates from reliance on weather-dependent agricultural products – sunflower seeds, wheat, grapes, and fruits – but also from external and internal shocks. In 2014, disputes with Russia led to a ban on Moldova’s wine exports, causing a huge drop in export earnings almost simultaneously with the 2015 drought. About the same time, internally, a major banking crisis erupted in 2014 with the failure of three major banks, and consequently credit to the private sector has steadily fallen from a about 40 percent in 2008-13 to about 26 percent in 2017.<sup>22</sup> While financial stability has improved since them, this underscores the policy wisdom of seeking greater product and market diversification that will allow the economy to weather economic storms.

**Figure 16. Convergence to European incomes has been disappointing**  
Average 1996-2016 growth rate of real GDP per capita relative to average European countries versus initial levels



Source: World Bank Staff calculations based on World Bank, World Development Indicators

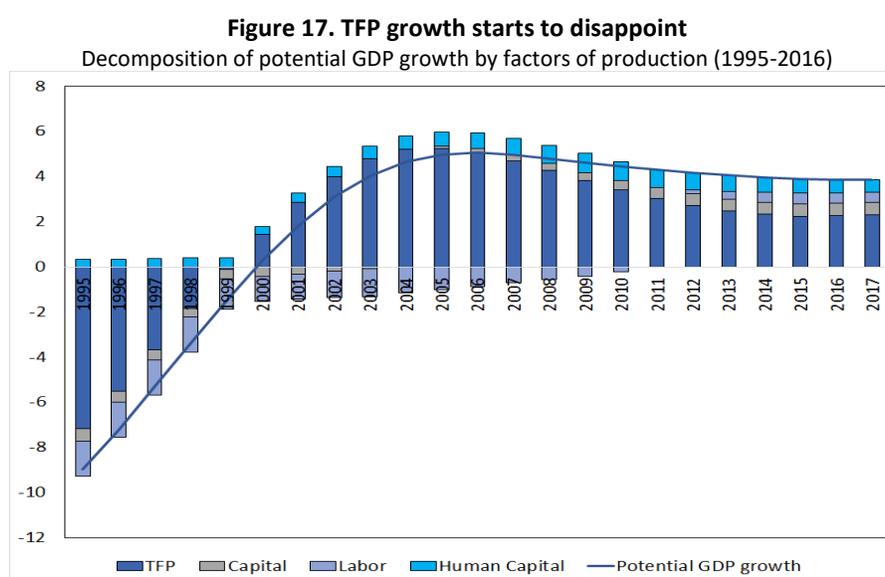
A second problem is an apparent secular decline in growth rates. Looking at the past twenty years Moldova’s convergence towards the average income level of European countries has been sluggish (Figure 16) owing to Moldova’s poor performance during the second half of the ‘90s. Yet despite growth being fairly robust in the first decade after 2000, even allowing for the effects of shock-induced recessions, each successive recovery reached a lower ceiling than the one before. With growth in 2017 of about 4.5 percent, growth in 2018 is estimated to be at about 4.8 percent,<sup>23</sup> and, despite the favorable external environment, projections estimate growth in 2019 to be at about 3.5 percent (IMF WEO 2019) (Figure 10). This bodes poorly for future job creation.

<sup>22</sup> IMF, (2017), Article IV.

<sup>23</sup> This estimate will be up-dated as new information becomes available.

## Understanding falling dynamism

Moldova's growth problem is rooted in the country's inability to maintain productivity growth (Figure 17). Increases in total factor productivity that powered growth rates between 5-6 percent in the first five years of the 2000s have fallen to about a third of their earlier levels. TFP growth surged during the late nineties in tandem with large structural reforms, such as the end of the moratorium on land privatization, the partial privatization of the electricity sector, the abolition of energy subsidies, and improvements in the legal and regulatory framework, including pension reform. As the effects of these reforms waned, the rate of TFP growth first stabilized and then slowed after the mid-2000s. Part of this slowdown was due to the shocks the economy suffered in the last decade, but a greater part was caused by the inability of the economy to shift resources from low-productivity sectors to high-productivity sectors, or to shift resources within sectors to higher productivity uses, and by the inability of firms to use innovation to seize new market opportunities (points worthy of additional analysis below).



Source: World Bank Staff calculations based on PENN World Tables until 2014. Decomposition interpolated based on World Bank, World Development Indicators, ILO ILOstat database and PENN World Tables.

Note: HP filtered series (smooth parameter=100) and using two-year moving-averages of labor and capital shares.

### Box 1. How to Get to 6 percent Growth Rate by 2020? Some Back of the Envelope Calculations

Based on existing projections at the time of writing, potential output is currently expected to grow by 3.8 percent in 2019-20, well short of the 6 percent growth predicted in the "Moldova 2020" National Development Strategy. How can the economy accelerate to 6 percent in 2019-20? If we assume that capital, labor, and human capital grow at the same level observed during 2016-17, then TFP would need to grow by an additional 2 percentage points compared to the level observed in 2016-17. Assuming instead that the investment to GDP ratio, as well as the labor to capital ratio, remains unchanged from 2018 estimates, TFP would need to grow by an additional 3.7 percentage points. Simple back of the envelope calculations reveal that bringing the TFP growth of underperforming SOEs up to the average TFP growth observed among foreign firms in the same year and sector would have increased TFP growth by an average of 2 percentage points during 2010-16, bringing the 6 percent GDP target growth rate within reach. Increasing investment through improved incentives and augmenting human capital through educational reforms could also contribute toward achieving the 6 percent goal.

Source: World Bank Staff

Before analyzing TFP performance, it is useful to briefly review constraints inhibiting the contribution of capital and labor to economic growth.

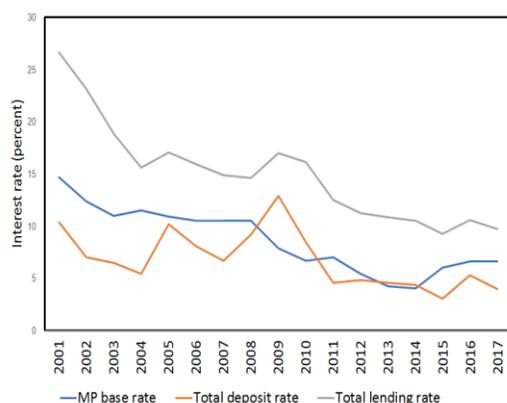
### Capital

The contribution of capital to growth has been relatively small – but positive in recent years (Figure 17). Since the Great Recession, national savings have hovered in the 17-19 percent of GDP range, most of which were mobilized in the private sector (IMF 2017). Even though investment levels have typically hovered at about 23 percent of GDP, their contribution to growth has been declining (Figure 31). Based on general government capital expenditures figures, roughly four-fifths of this investment was undertaken by the private sector -- though that number would be considerably smaller if state enterprises were not counted as part of the private sector.

Two factors constrain capital accumulation. First, the government still dominates the economic landscape to an extent far greater than in many countries of Eastern Europe. According to Ionita (2016), the state ownership share of national fixed assets is just under 50 percent. State enterprises have generally been less efficient than the private sector in using capital (a point discussed further below). At the same time, the general government, already plagued with moderately low tax buoyancy, has had to cross-subsidize transfers to pensioners and households, finance losses among the state enterprises, and pay the cost of the financial resolution (estimated at about 10 percent of GDP in 2016).<sup>24</sup>

A second impediment to investment on the supply side is the high cost of finance. Indeed, Moldovan firms have to deal with significantly high costs and limited access to external funds. Almost 70 percent of all investments in fixed assets are financed with internal funds. High reliance on internal funds and high collateral requirements are associated with lower TFP levels. More precisely, a 1 percent increase in the required collateral decreases productivity by 0.5 percent (World Bank 2016b).

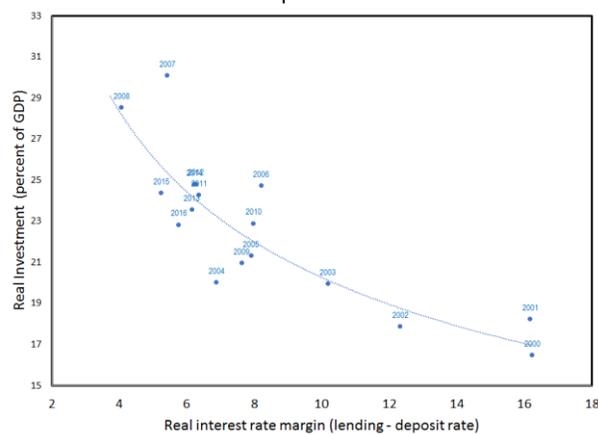
**Figure 18. High interest rates and large lending spreads keep the cost of finance high...**  
Deposit, lending, and monetary policy rate



Source: World Bank Staff calculation based on Moldova National Bank database

**Figure 19... and discourage capital accumulation**

Investments as percent of GDP and lending to deposit rate spread



Source: World Bank Staff calculation based on Moldova National Bank database and Moldova National Bureau of Statistics

Interest rates have come down sharply since 2000 and spread between deposit rates and lending rates have gradually narrowed, but rates still remain high (Figure 18), a sign of limited competition in the

<sup>24</sup> Numbers calculated from IMF (2017), 35.

banking sector. The government's recourse to deficit financing from the banking system has continued to put upward pressure on rates. The prevalence of nonperforming loans (estimated at 14.7 percent in June 2018), the absence of competition in the banking system, and the high dollarization of loans, with margins that necessarily reflect currency risk as well as commercial risk, lead to higher spreads. These facts have a direct effect on investment rates. Investments are inversely correlated with the declining cost of borrowing; as interest rate spreads have come down from the early years after 2000 toward the end of the decade, real investment rates as a share of GDP rose appreciably (Figure 19).

**Box 2. Access to Finance: Supply-side Constraints of the Banking Sector**

Financial intermediation in Moldova is low and has been declining since 2013. On the supply side, a high rate of NPLs, inadequate access to long-term funding, and preference to hold government securities undermine banks' ability to finance the real economy. Inadequacies in the financial infrastructure, including the credit information system, insolvency, and secured transactions frameworks, pose another hurdle to financial intermediation. A first policy priority therefore is to further develop necessary tools for debt resolution. The main tool available in Moldova to achieve this goal is the Insolvency Law, which was enacted in 2012 and remains widely used, although some structural deficiencies still remain unaddressed. In particular, the system fails to provide adequate incentives for reorganization. Consequently, use of the kind of restructuring techniques which could support long-term business rehabilitation is limited. There is also a consensus that the tendency to use the liquidation system as a substitute for private enforcement persists and also that there are no adequate monitoring mechanisms to counter fraudulent conduct. As a result, reorganizations are scarce when compared to liquidations, and even those reorganizations that manage to get approved do not succeed in implementing the changes required at the operational level to rehabilitate the debtor's business. The obvious result is that returns to creditors remain low, thereby perpetuating high NPL ratios and an unfavorable credit environment. A reform of the 2012 Insolvency Law that addresses these shortcomings, together with a focused effort to improve the implementation of the law by judges and insolvency administrators, should both be critical pillars to address NPL resolution and improve credit risk. Insolvency and enforcement are just two aspects of a broader NPL resolution framework, and a comprehensive assessment would be required to enable effective resolution of NPLs, which in turn will facilitate credit growth in the economy.

An additional reform that is equally critical for the recovery of the Moldovan economy is the introduction of the necessary tools for small and medium enterprises (SME) to leverage their moveable assets and obtain the necessary credit that will enable them to support sustainable growth. Despite the numerous legislative reforms undertaken in recent years, Moldova faces an important implementation gap – similar to the existing one in the area of insolvency – due to market participants' lack of understanding of the benefits of the collateral registry. Even though the 2014 Pledge Law recognizes multiple forms of security and allows financial institutions to register their security directly with the collateral registry, these options are not being used in practice because both borrowers and lenders are not aware of, or do not rely on, the advantages provided by the new legal system. As a result, loans tend to be overcollateralized, small businesses are unable to obtain enough credit based on the collateral that they are able to offer, and unsecured credit is practically non-existent.

Source: World Bank Staff Financial Sector Global Practice

***Labor and human capital***

A salient feature of the Moldovan economy is minimal or even at times negative contribution of labor to economic growth. Net job creation has stagnated (Figure 12) and the number of employed population in Moldova has declined sharply from 2000 – falling from about 1.5 million to a lower plateau of about 1.2 million in 2009-16. This reflects the perceived lack of opportunity in the country, as well as the enticement of higher wages in neighboring countries. In 2016, wages in Power Purchasing Parity (PPP) terms in

Moldova's manufacturing sector were less than half of those in Slovenia, Poland, or the Czech Republic, to say nothing of other European countries (Figure 15). "Pull factors" of rising, recovery-driven labor demand in Europe after the Great Recession interacted with "push factors" in Moldova of there being few opportunities due to slow growth that caused a drain in the domestic economy of some of the country's most talented workers.

The problem of high outmigration of workers to other countries over the last decade was compounded by a steady decline in labor force participation. Participation rates for both men and women declined from 50 percent in 2000 to about 42 percent in 2017 – even during periods of relatively low official unemployment. These rates were the lowest among Eastern European countries for both men and women (World Bank 2016b). While part of this is attributable to outmigration (because migrant workers are officially classified as inactive), a mixture of other motives also appear at play. For example, new graduates leaving school were taking longer to transition to work, and workers in rural areas experienced high rates of inactivity (World Bank 2016b: 20-21).

These forces have produced mismatches in the labor market, perceived by both firms and workers. On the one hand, firms in surveys typically highlight the difficulty in finding workers with suitable skills; nearly half of firms surveyed by Rutkowski et al. (2016) reported this problem. Among specialists, the primary skill gaps reported are foreign language, computer skills, analytical, and problem solving. From the workers' perspective, 43 percent reported lack of connection between their education and their job – in many cases because they were overqualified for the jobs they held or were working outside their field of training (Hoftijzer et al. 2018). This calls attention to the shortcomings of the education system, the subject of in-depth analysis in Chapter 5.

One further dampening effect on employment creation is the existence of substantial wage taxes levied on employers. Wage taxes for pension and health amounted to a combined 27.5 percent, and following the recent reform were at 22.5 percent. This drives employers to negotiate wages and salaries downward or even to move into the informal economy. From the workers' perspective, already higher wages in neighboring countries (see Figure 15 above) are made even higher because effective take-home pay is higher. Yet the structure of revenue system is skewed towards labor income taxes, which are necessary for financing the expenses of the system. This result is also due also to the large presence of tax expenditures, such as zero-rated and VAT exemptions, which often have no explicit rationales on economic or social grounds and tend to favor selected segments of the population or of business. Reducing the burden of labor taxes requires finding alternative sources of revenue, such as reducing these tax expenditures.

### ***Productivity growth: change across sectors or improvement within sectors?***

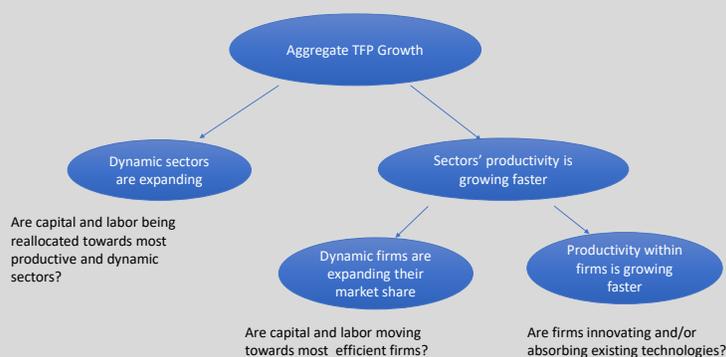
So why has productivity growth slowed? One way to begin to answer this question from the supply side is to examine the economy's performance in shifting resources (a) across sectors from low-productivity sectors to high productivity sectors, (b) within sectors to high-productivity firms, and (c) within firms themselves to use capital and labor more efficiently, usually through innovations to seize new market opportunities.

Moldova has experienced solid improvements in productivity through the first channel, the effects of structural transformation. But within sectors, resources have not always moved to the most efficient firms, and productivity growth within firms has been disappointing. During 2010-16, the share of employees in the economy have moved out of agriculture, with its relatively low productivity, to manufacturing and to a larger extent to the service sectors, which have higher TFP levels (Figure 20).

However, TFP growth at the sectoral level – shown as the dot in Figure 21 - has been modest among some of the most productive and promising sectors, such as information technology (IT) and transport. The decomposition of the average TFP growth within each sector highlights the drag that *within firm productivity* imposes on sectoral trends. It is negative in virtually every sector. Keeping in mind that the estimated TFP represents a revenue rather than a quantity-based measure due to the absence of detailed data on prices, the results suggest the absence of both innovation and managerial dynamism.

**Box 3. Dissecting Productivity: Channels that Affect TFP Growth**

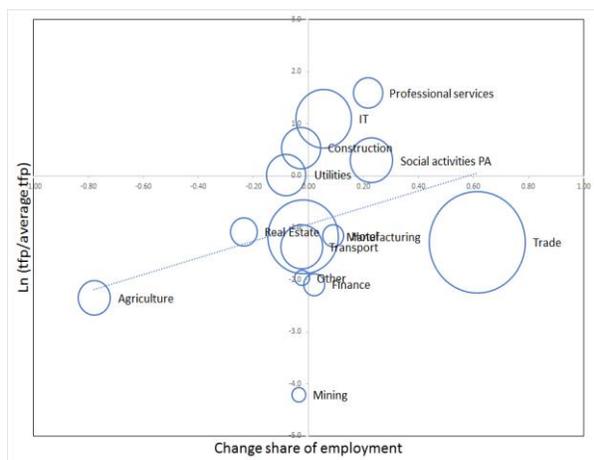
Total factor productivity (TFP) is the way firms (and the economy) combine capital and labor to produce output. In the long run, the growth of TFP is a main driver of growth in modern economies. The growth of TFP occurs through three main channels: the first is that market forces (themselves influenced by government policy) shift resources into more productive sectors. The second and third operate through *within* sector productivity growth. The latter occurs as more efficient firms expand their share of markets (channel 2) and as firms themselves use new technology to drive their growth (channel 3).



Note: See also Gamberoni et al (2016) at [https://www.ecb.europa.eu/home/pdf/research/compnet/20160421/20160421-10-Gamberoni Capital and Labour \(Mi\)sallocation.pdf](https://www.ecb.europa.eu/home/pdf/research/compnet/20160421/20160421-10-Gamberoni%20Capital%20and%20Labour%20(Mi)sallocation.pdf)

**Figure 20. Employees have been reallocating to sectors experiencing higher TFP level...**

Changes in share of employees and deviation of TFP levels

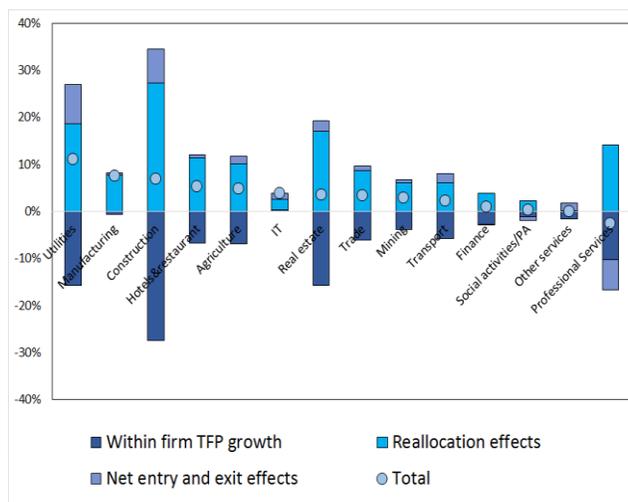


Source: World Bank Staff calculation based on INE Administrative data  
 Note: size of the bubble denotes average share of value added

**Figure 21. ...Yet TFP within sectors, firm level TFP growth has been disappointed and resources have not flown to most productive firms**

Decomposition of TFP Growth across sectors

(Average 2010-2016)



Source: World Bank Staff calculation based on INE Administrative data and Foster, Haltiwanger, and Krizan (2001)

## Explaining Productivity Performance: The State and Private Sector

### Big government and space for the private sector

Since the turn of the new century, Moldova has sought to create an environment in which the private sector could become a driver of growth. To some extent, it has succeeded. The economy has been progressively freed of price controls and rigid planning, some state enterprises were privatized, and many sectors were opened to foreign investment. However, the process of creating space for the private sector to lead development has lagged behind other countries in Eastern Europe. Moreover, if anything, the size of government today is larger than in the early 2000s. In 2002-04, for example, expenditures of the general government hovered at about 30 percent of GDP. Increases in wages and social benefits pushed up expenditures sharply until 2009, and despite adjustment efforts and reforms, they have hovered in the 38-40 percent range ever since.<sup>25</sup>

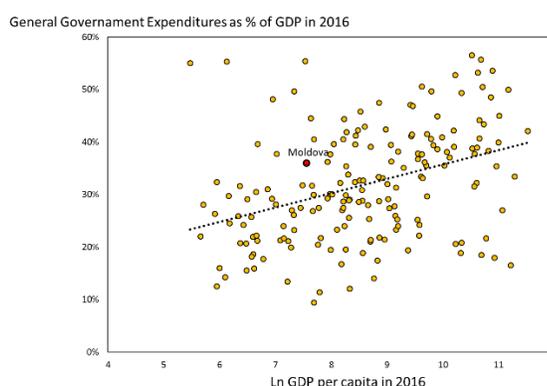
One comparative measure is instructive: the size of government. In 2016, with total government expenditures hovering at about 36 percent of GDP, the size of its government was about 8 percentage points of GDP larger than the average for other countries at a similar level of income per capita (Figure 22). Among other things, this implies an unusually heavy tax burden that extracts resources from the private sector, mostly to support consumption rather than investment, and that therefore on balance subtracts from overall productivity growth.

### State ownership remains large...

Among enterprises, firms often face different incentives that affect productivity and that influence their proclivity to adapt to new technologies. These incentives depend on the degree of market competition, their ownership (public or private), and the policy framework. Moreover, in a competitive environment, firms add inputs needed in their production process until the marginal costs of these inputs equals their benefits. Yet policies and incentives that introduce a wedge - or reduce the gap - between the returns and costs of the factor of productions may lead firms to hire inputs not in line with their productivity level.<sup>26</sup> Competition policies and openness to foreign investment are discussed in Chapters 2 and 3, but suffice it to say here that both are linked to the large presence of state enterprises. State enterprises often have objectives other than making a profit, including creating employment, undertaking activities that provide

### Figure 22: Moldova has a very large government relative to its income

General Government Expenditures as % of GDP and Log GDP per capita in 2016



Source: World Bank Staff calculations based on IMF WEO and World Bank WDI databases

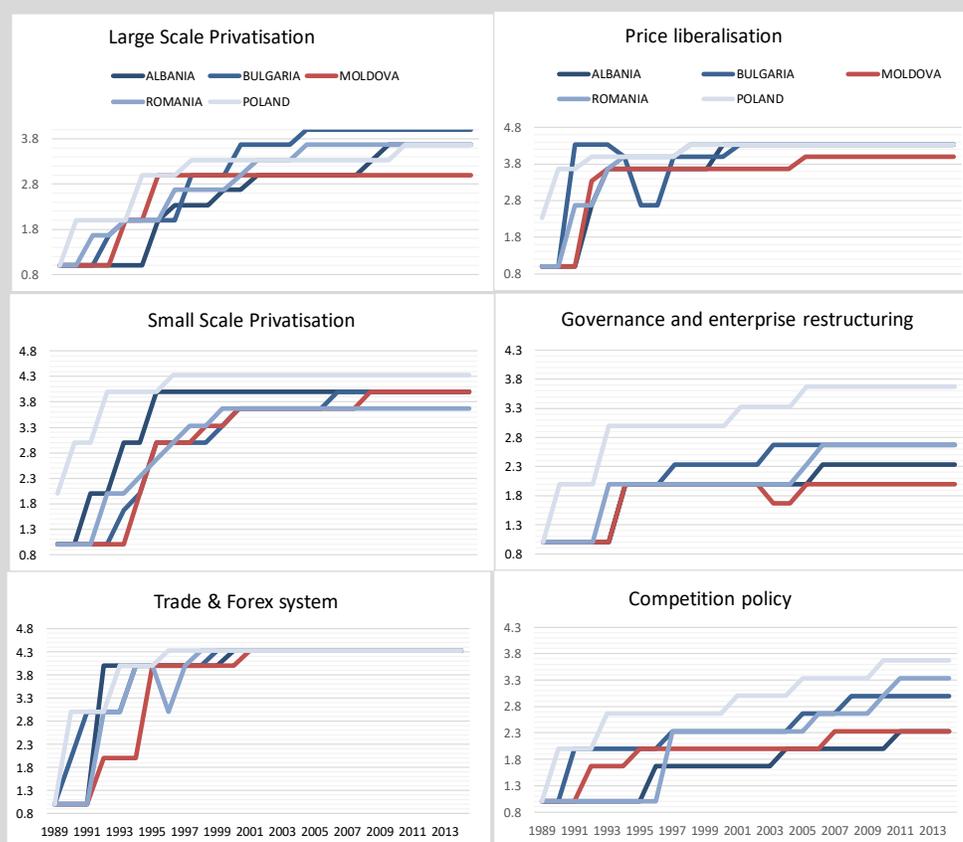
<sup>25</sup> See World Bank Group *Public Expenditure Review – Capital Expenditures – Making Public Investment Work for Competitiveness and Inclusive Growth in Moldova* (Washington, DC: World Bank, 2013) 6-8.

<sup>26</sup> See Hsieh and Klenow (2009) for a theoretical model.

benefits for other sectors through preferential procurement rules or subsidized prices, or even bureaucratic incentives simply to maintain perquisites of office. They often have access to capital at reduced or even subsidized costs (see OECD 2015).<sup>27</sup>

#### Box 4. Moldova and the Transition to a Market Economy: An Unfinished Business?

Moldova appears to lag behind its comparators in undertaking the necessary reforms for the transition to a market economy. In particular, the country falls behind in four out of six European Bank for Reconstruction and Development (EBRD) Transition Indicators: large scale privatization, price liberalization, governance and enterprise restructuring, and competition policy. The indicators track the development of transitional economies from 1989, with high scores signaling closeness to advanced economies (Source: EBRD). Comparing Moldova to Poland, a country whose economic ascent has been remarkable, Moldova performs as Poland did in the early nineties, although their scores were almost similar at the beginning of the transition.

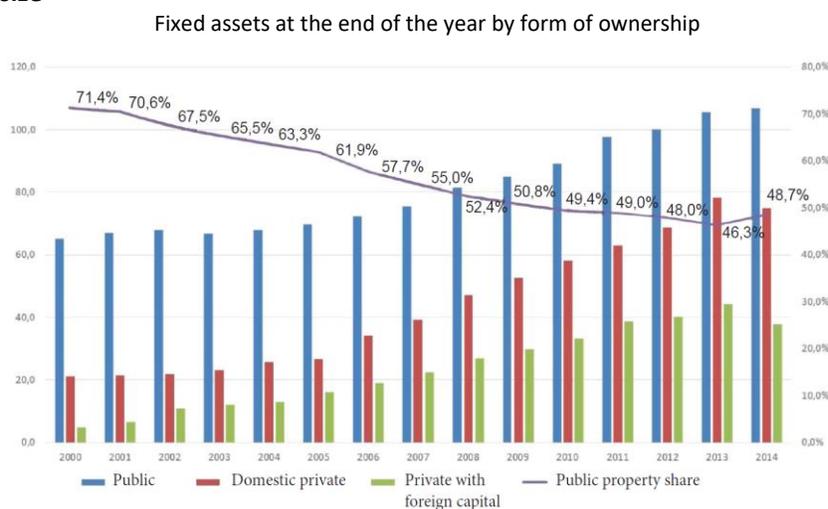


Source: World Bank Staff based on EBRD Transition Indicators

<sup>27</sup> See OECD State Owned Enterprises in the Development Process [https://www.oecd-ilibrary.org/finance-and-investment/state-owned-enterprises-in-the-development-process\\_9789264229617-en](https://www.oecd-ilibrary.org/finance-and-investment/state-owned-enterprises-in-the-development-process_9789264229617-en). See also, Shirley et al., *Bureaucrats in Business* (Washington, DC: World Bank, 1996).

As part of their reform programs, countries in Eastern Europe sought to narrow the focus of the public sector in order to widen the boundaries of their private sectors. They typically undertook ambitious programs of privatization and sustained efforts to attract foreign investment (See also Box 4).<sup>28</sup> Moldova was no exception. Shortly after independence, in 1993, it launched a privatization process, beginning with residential housing, small scale traders, and roughly half of small and medium enterprises (SME). After 1996, several large-scale enterprises in energy and telecommunications as well as some companies in cement, leather, textiles, wineries, and hotels were sold. But many state enterprises were retained in the public sector. During the period after 2000, the government opened up to foreign direct investment. FDI

**Figure 23. The state share of fixed assets fell as private sector increased its size**



Source: Ionita (2016) based on Moldova National Bureau of Statistics data

Property Administration and Privatization, the state held shares in 362 SOEs, including 251 state enterprises and 111 joint stock companies.<sup>29</sup>

flows averaged US\$24 million during 1995-97 (about 1.4 percent of GDP), grew to an average of US\$103 million in 2001-04 (about 5 percent of GDP), and surged to US\$444 million in 2006-09 (about 9.1 percent of GDP).

In 2007, the government sought to widen the scope of enterprises eligible for privatization and shifted control of state assets to a Public Property Agency (PPA). In 2016, according to data in the Report on Public

<sup>28</sup> See Uwe Bower, "State-Owned Enterprises in Emerging Europe: The Good, the Bad, and the Ugly" (International Monetary Fund (IMF) Working Paper WP/17/221 Washington, DC, October 2017).

<sup>29</sup> The World Bank (2017) reports notes several discrepancies with the numbers of SOEs. The Registry of Companies, available through the Government open data portal, as of 2016, states there are 1415 registered state enterprises, of which 450 are liquidated. The difference of 714 state enterprises (1415 "initially registered" - 450 "liquidated" - 251 registered in the Registry of Public Patrimony) raises questions regarding the data integrity and traceability of half of initially registered state enterprises, although in some cases the same company appears in the registry several times which indicates reorganization. This issue is somewhat highlighted by the 2015 PPA report (although it says about 397 SEs are not registered in the Registry of Public Patrimony) which suggests the main reason is fragmentation of the public property administration by sectors/branches. Two types of state owned enterprises are prevalent in Moldova, state enterprises (SE) and joint stock companies (JSC). As described in the report on SOEs of the World Bank (2017), the majority are SEs, which are wholly owned and governed by the state. A smaller group of enterprises are JSCs and the state may own various proportions of shares from partial ownership to full ownership. Governance arrangements for SOEs are not standardized or consistent. SEs and JSCs have different legal frameworks. In the case of SEs, strategic management responsibilities lie with the responsible line ministries, a board of directors and administrator. According to the Law on State Enterprises board members are appointed by the founding institution; the administrator (chief executive) is appointed by the founding institution based on the board's proposal. In the case of JSCs, the governance arrangements comprise a general meeting of shareholders (the state appoints a "state representative" to act on its behalf as owner), board of directors, executive body and censors' committee. In addition, the Ministry of Finance exercise certain monitoring functions on behalf of the state. In sum, the ownership of SOEs is highly fragmented, purposes and objectives of each are not clearly set out, and the overall governance arrangements inconsistent.

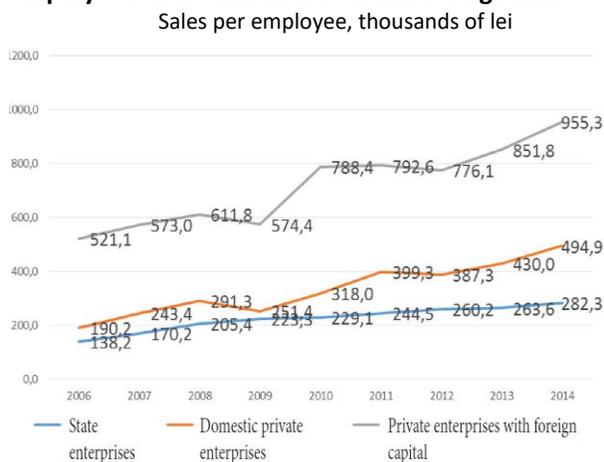
These policies changed the productive landscape in Moldova. The state share of fixed assets fell from 71 percent in 2000 to under 50 percent by 2014 (Figure 23). The declining share occurred not so much through asset divestiture as through creating greater space for private sector growth. The domestic private sector has risen three-fold, and the foreign private sector has grown seven-fold. The state enterprises by and large have been less efficient in mobilizing savings for investment.

Nevertheless, the state sector remains substantially larger in Moldova than in most other countries. Based on the Orbis database, Böwer (2017) calculates that among 11 emerging European countries (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia) state owned enterprises contributed between about 1 and 12 percent to total economic output, and accounted for between 0.5 and 8 percent of total employment during 2012-2014, excluding the health sector. Using the same time-span and the same sectors analyzed in the Bower study, based on administrative data, it appears that the share of sales and employees in state enterprises in Moldova were 9 percent and 7 percent,<sup>30</sup> respectively. Notwithstanding differences in databases and classifications, Moldova appears to have an SOE sector that is more than two or three times larger than other countries in the region.

### ...but SOE productivity lags behind other firms...

State enterprises appear to be significantly less dynamic and less productive than either their private and foreign counterparts. Over the period 2006-14, according to Ionita (2016), state enterprises registered lower sales per employee in every year, and slower growth in this measure of performance (Figure 24). These same differences in productivity hold if the measure is value-added per employee.

**Figure 24. State enterprises have registered sales per employee lower than domestic and foreign firms**



Source: Ionita (2016) based on National Bureau of Statistics data.

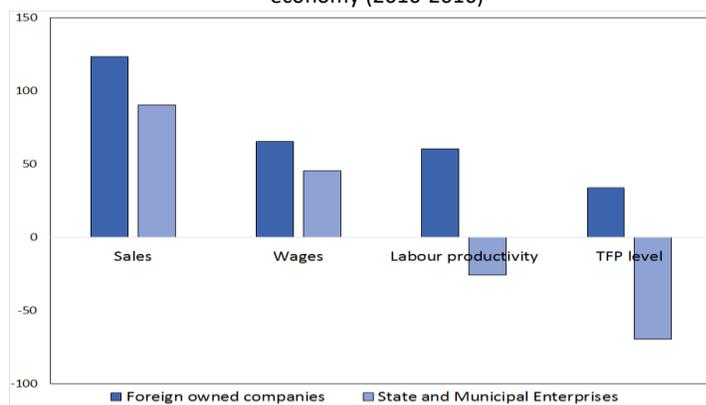
More detailed comparisons reveal the overriding superior performance of private firms, and particularly foreign firms. Even though state and municipal enterprises have a larger growth of revenues than do private firms, and pay workers about as much on average as foreign firms, their labor productivity is well below the productivity of private firms (Figure 25).<sup>31</sup> Beyond their use of capital and labor in combination – that is, total factor productivity – their performance is substantially below both private firms and foreign firms. Their unit costs of labor are also substantially greater than in both private and foreign firms, whose labor costs are nearly the same. Finally, foreign firms' TFP growth has outpaced by three percentage points both state and municipal enterprises and domestic private firms over the period 2010-18. These differences are statistically significant, controlling for year and sector trends.

<sup>30</sup> Based also on ILOStat database.

<sup>31</sup> Firm level analysis based on National Bureau of Statistics administrative data is based on the classification provided by National Bureau of Statistics, which identifies the official property classification on the basis of the decision of the Department of Standards, Metrology and Technical Supervision n. 276 of 04.02.1997. Based on this classification and on the available data, foreign firms correspond to those firms that are owned by foreign citizens, legal entities and persons without citizenship or with mixed foreign ownership (without the participation of the Republic of Moldova).

**Figure 25. SOEs drag down productivity in the economy**

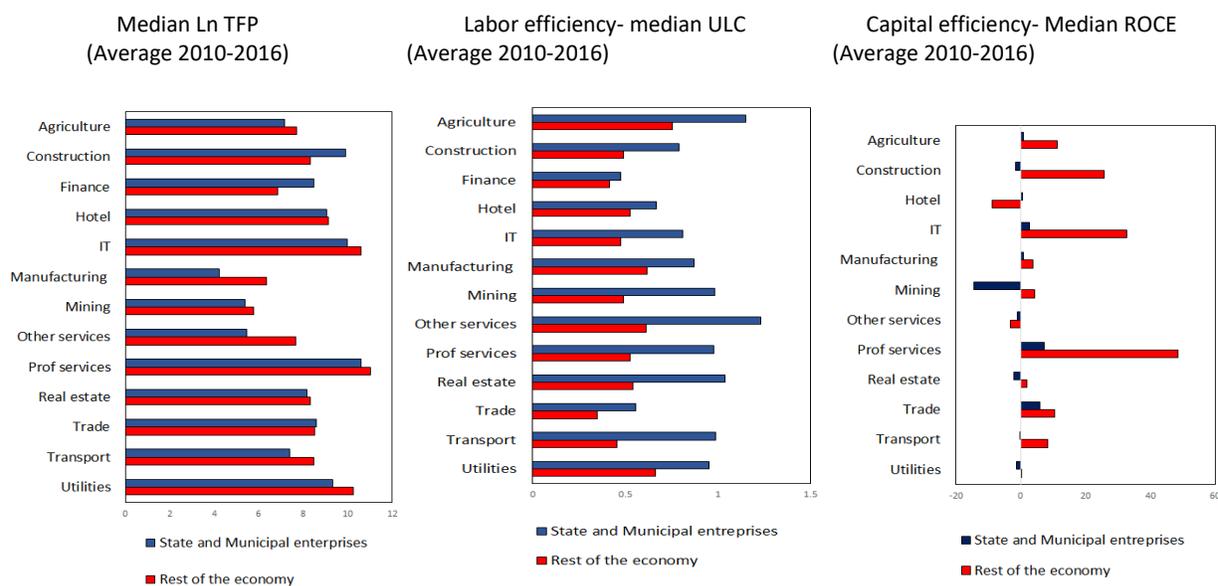
Average percentage differences relative to private domestic firms in the economy (2010-2016)



Source: World Bank Staff calculations based on Moldova National Statistical Bureau administrative data

Note: Regressions controlling for sector and year dummies. Excludes the PA, Health, and Education sectors.

unit labor costs are substantially higher in almost all sectors (Figure 26).<sup>34</sup>

**Figure 26. SOEs are a drag on productivity in almost every sector**

Source: World Bank Staff calculations based on Moldova National Bureau of Statistics administrative data

Note: ROCE calculated as the ratio of pre-tax profits to fixed capital. Data for financial sector not available.

A final factor is the prevalence of state enterprises in infrastructure. Firms perceive limited access and poor quality of electricity, transport, and telecommunications to be impediments to their growth. About 30 percent of responding firms said poor quality of electricity was a problem, while others flagged

<sup>32</sup> Median quantile regression controlling for sector level and year effects shows significant difference in all sectors but hotel, real estate, mining, and trade.

<sup>33</sup> Median quantile regression controlling for sector level and year effects shows significant differences in all sectors except construction, hotel, IT, trade, and other services.

<sup>34</sup> Median quantile regression controlling for sector level and year effects shows significant difference in all sectors except finance.

concerns about transport and telecommunications. Weak electricity and water services also undermine productivity. Power outages, irrespective of their duration, are associated with lower productivity levels. All else being equal, the productivity of those firms that reportedly experienced power outages in the year of the survey was almost 3 percent lower than the productivity of those that did not suffer interruptions in their power supplies. In addition, the longer a firm has to wait to establish a water connection in a new facility, the greater its productivity loss. In fact, for each additional day that a firm has to wait to get its water supply, productivity falls by 0.11 percent.<sup>35</sup>

Because there is a case to be made for the need for a strong state presence in infrastructure and some utilities – electricity generation, water supply, road construction – the remedies for performance shortcomings are typically different than in other sectors where the private sector, operating in a competitive environment, could attain higher rates of productivity growth than the extant collection of state companies. Whereas improving productivity in the non-infrastructure SOE sector can involve divestiture, governance reforms, and reductions in policy barriers to competition, remedies in these infrastructure sectors involve a combination of regulation, management reforms, and new public investment (see final section on policy).

### **... and foreign-owned firms have been key innovators in Moldova**

Foreign-owned firms in Moldova tend to be not only more productive but to have higher productivity growth than domestic counterparts (Figure 25 above), due in part to their ability to adopt new and more efficient technologies. In Moldova, the latest Enterprise survey (2013) revealed that about 64.6 percent of foreign firms<sup>36</sup> compared to 4.2 percent of domestic firms invest in research and development. A skilled workforce also helps companies to develop and adapt modern technologies to their production process. On average about 50 percent of the workforce employed in foreign companies have university degrees compared to about 28 percent among domestic companies. Moreover, about 81 percent of foreign owned firms offered training programs compared to about 27 percent of domestic firms.<sup>37</sup>

The role of skills in developing or absorbing modern technologies is also visible in the high correlation between the reliance on professional management, as opposed to management appointed without regards to merit, and spending on research and development (Figure 27). Yet as reported in the recent SOE study, processes are not available to evaluate the performance of administrators or to evaluate the link between the long-term interest of the enterprise and administrators' remuneration.

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<sup>35</sup> These estimates are taken from World Bank (2015a).

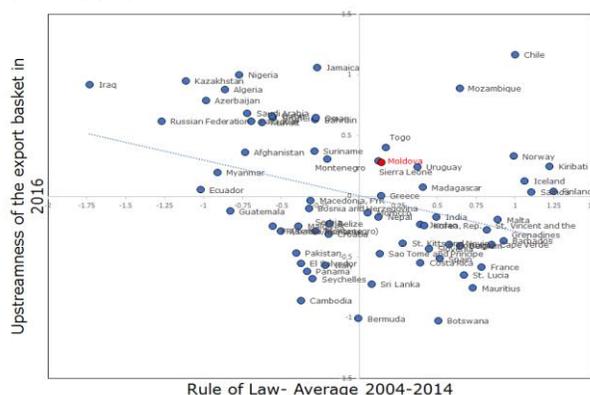
<sup>36</sup> Foreign firms are defined as firms with 10 percent or more foreign ownership. Using a stricter measure of foreign ownership (with 50 percent or more foreign ownership) reveals that 81 percent of foreign owned firms invested in R&D compared to 6 percent of domestic owned firms.

<sup>37</sup> Setting the threshold to foreign ownership at more than 50 percent reveals that about 79 percent of the workforce of foreign owned firms has a university degree compared to about 28 percent of the remaining firms and that 95 percent of foreign owned firms offer trainings compared to 30 percent of the rest of the firms.



**Figure 28. Upstream position in international value chains correlate negatively with the ability to enforce contract...**

Upstreamness of the export basket in 2016 and average 2004-2014 rule of law

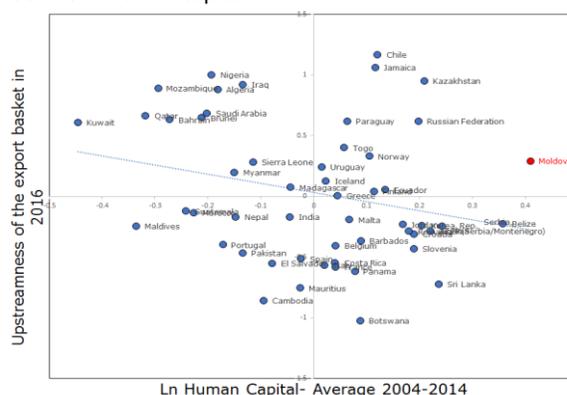


Source: World Bank Staff calculations based on Antras et al. (2012) and WITS Comtrade database, World Bank Governance Indicators (lhs chart) and Penn tables (rhs).

Note: Partial controlling for GDP per capita

**Figure 29... as well as with the skill endowment of a country**

Upstreamness of the export basket in 2016 and average 2004-2014 human capital



### Box 5. Contract Enforcement and the Judicial System: The Case of Moldova

The ability to enforce contracts provides assurance to investors that their contractual rights will be protected. Contract enforceability, by reducing the uncertainties faced by investors, helps commercial transactions, particularly those related to the participation chains where just-in-time production and investment at the intermediate stages are specifically related to achieving the final product. For contracts to be enforceable it is essential that the courts function properly and fast.

Yet a series of issues challenge Moldova's justice system. Based on court user surveys conducted in late 2017, World Bank (2018) shows for example that 46 percent of citizens and 47 percent of businesses perceive that corruption has increased. Courts, prosecutor offices and bailiff services received low efficiency ratings from citizens and businesses who were parties to court proceedings.

World Bank (2018) identifies several recommendations to improve the performance and efficiency of key elements of Moldova's justice system (including financial, human, information and communications technology and physical infrastructure). Recommendations more directly linked to the business investment climate include, for example, the following: i) addressing feedback on performance and corruption captured in the 2017 user surveys through targeted actions and investigations (including prosecutions of justice sector officials and staff for corruption), publicizing progress annually, and repeating surveys every two years; (ii) reforming the prosecution service and eliminating amendments to laws or draft laws that would be contrary to the opinion of the Venice Commission, or that would limit the powers of the prosecutors to combat high level corruption; (iii) putting in place a transparent mechanism for selection and promotion of judges; (iv) ensuring that all court cases are assigned randomly, and promptly investigating and sanctioning attempts to interfere with the Integrated Case Management System; (v) ensuring that ICT services and related ongoing reforms address public concerns about access, transparency, and accountability; and (vi) reviewing the current plan to reorganize the judicial map, taking into account international good practices to identify further streamlining actions and cost savings, such as designating a single court with territorial jurisdiction across Moldova for small-value high-volume civil enforcement cases and online filing capability, following EU good practice (World Bank 2018).

Source: World Bank Staff based on World Bank (2018).

## Summary reflections on Moldova's growth: the productivity problem

The fact that the growth impetus in the Moldovan economy is slowing is worrisome because it portends a worsening of the labor market conditions that are driving Moldovan young people to look for jobs elsewhere. Moreover, slower growth would, if left unremedied, make it increasingly unlikely that the country's overall standards of living can converge with Europe, even in the space of one or two generations.

A principal problem is falling productivity levels. Shifting resources from low productivity sectors to higher productivity sectors is not occurring at a pace necessary to drive productivity gains, and within-sector productivity is increasing too slowly. Two reasons underlying these trends appear to be first, a large and less productive state sector that drags down productivity, and second, weak competition in product markets. But that picture would not be complete without looking at the demand-side issues and the opportunities open to Moldovan firms.

### Falling Productivity: Demand-side Issues and Role of Exports

Moldova, as a small low-income country, can only accelerate its growth if it accelerates growth of its exports, and enterprise productivity is essential to exporting. Productivity heavily influences export performance in both goods and services markets. Firms that export are invariably more productive than their domestic counterparts and have a competitive advantage in productivity in foreign markets relative to their foreign competitors.<sup>41</sup> Trade can help increase a firm's productivity by allowing it to achieve economies of scale as it reaches larger external markets, and to be able to import intermediate inputs at market prices. As shown in World Bank (2015a), a key determinant of a firm's productivity (TFP) – in addition to normal control variables such as size, capital, and labor base – is whether it exports. The direction of causality may run in both directions: firms that are more productive tend to export, and exporting tends to make them more productive.<sup>42</sup>

The policy framework in Moldova is generally conducive to rapid export growth. Moldova is a comparatively open market and has been since the reform period in the late 1990s. Border barriers – tariffs and nontariff barriers – are relatively low. Simple average tariffs, which were 4.9 percent in 2001, have been held relatively stable and were 6.3 percent in 2015. Excise taxes on cigarettes, fuel, and liquor and a value-added tax are also levied at the border. Moldova has 14 Regional Trade Agreements with countries around the world, and these cover more than 76 percent of imports (WTO 2015). This implies that Moldovan firms have access to intermediate inputs at international prices.

Correspondingly, the more than 50 countries covered by Moldova's regional agreements provide preferential access to approximately 86 percent of Moldova's exports. The most important of these agreements is the Deep and Comprehensive Free Trade Area (DCFTA) with the EU, Georgia, and the Ukraine. It entered into effect (after some delay because of political turmoil in the Ukraine) in September 2017 as part of the Association Agreement with the EU that had taken effect three years earlier. Under the DCFTA, import tariffs on EU imports into Moldova were to be phased-down over the coming 3-10

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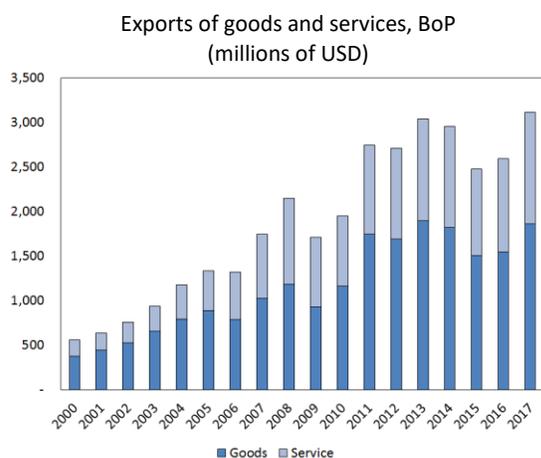
<sup>41</sup> See TFP regressions in the annex *Analysis of Trade Competitiveness* (World Bank, 2015).

<sup>42</sup> See World Bank, "Firm-level determinants of productivity" and Annex tables in Moldovan Trade Study "Analysis of Trade Competitiveness" (2015).

years in exchange for access to the EU market at zero tariffs for all products, except for a few agricultural products.<sup>43</sup>

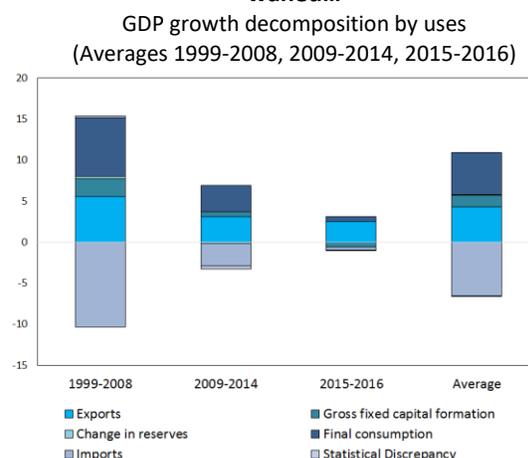
As a consequence of these policies, Moldova’s exports have risen substantially (Figure 30). Growth since 2000 has averaged 10 percent annually in nominal terms. Services have grown even more rapidly than goods – at about 12 percent annually. The contribution of exports to growth was especially strong during 2000-08, although it has faded in subsequent years as growth itself has attenuated (Figure 31).

**Figure 30. Exports have grown rapidly...**



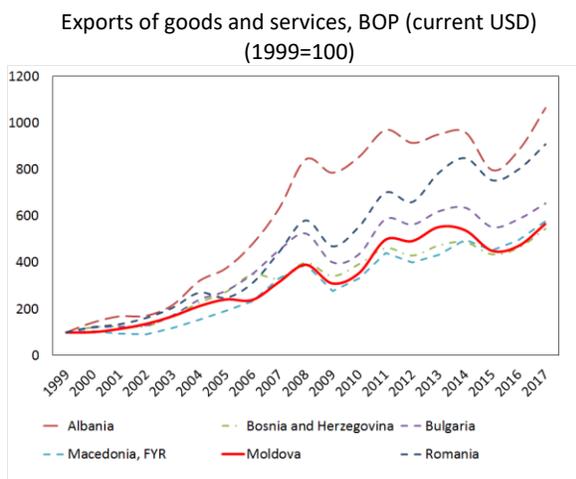
Source: World Bank, World Development Indicators database

**Figure 31...But their contribution to growth has waned...**



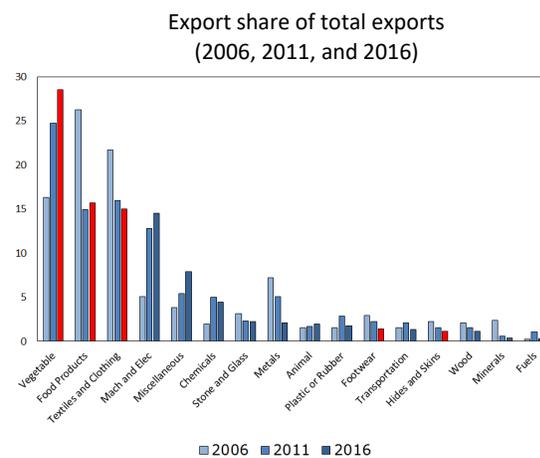
Source: World Bank Staff calculations based on World Bank, World Development Indicators database

**Figure 32... and other peer countries have performed better**



Source: World Bank Staff calculations based on World Bank, World Development Indicators database

**Figure 33. Exports are concentrated in food and textile but with some emerging diversification...**



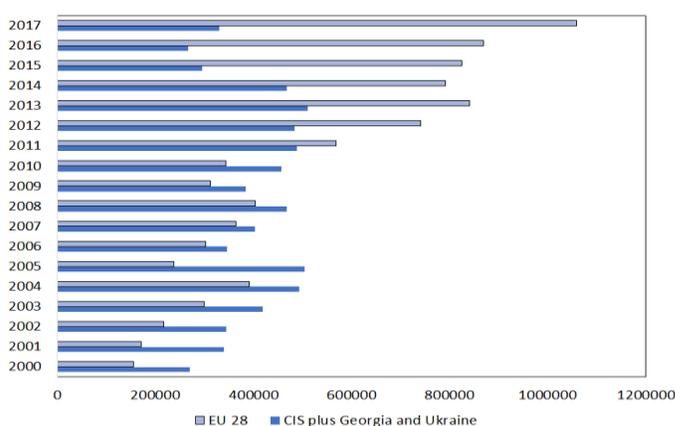
Source: WITS Comtrade database  
Note: Red bars reflects sector in which Moldova displays an international revealed comparative advantage

<sup>43</sup> WTO, *Trade Policy Review* (Geneva, 2015), (September 14, 2015 WT.TPR.S/32). The government was also progressively aligning its policies with EU regulations in TBT, SPS, competition, state aid, government procurement, intellectual property, energy, telecommunication and civil aviation.

## Merchandise exports: good but not great performance

Moldova has expanded its merchandise exports by about 9 percent annually over the period since 2000. The country has achieved a moderate diversification in its export basket, increasing the number of product varieties exported and reducing the degree of concentration. Yet the country still remains highly dependent on exports of a few products, particularly vegetables, food products, and textiles. After decreasing in the first half of the 2000s, the top three products increased their share in Moldova's total exports from 55 percent in 2011 to 59 percent in 2016. As would be expected from this pattern, Moldovan exports emanate from the "upstream" part of the value chain in almost all commodities – suggesting there may be scope for vertical integration forward into export markets. Other worrisome trends include low survival rates of new exported products relative to comparator countries, declining "complexity" in the export basket, and low export sophistication compared to neighboring countries – all of which augurs poorly for using trade to power growth (World Bank 2015a).

**Figure 34. The EU has supplanted the CIS as a key export market**  
Exports (thousands of USD)



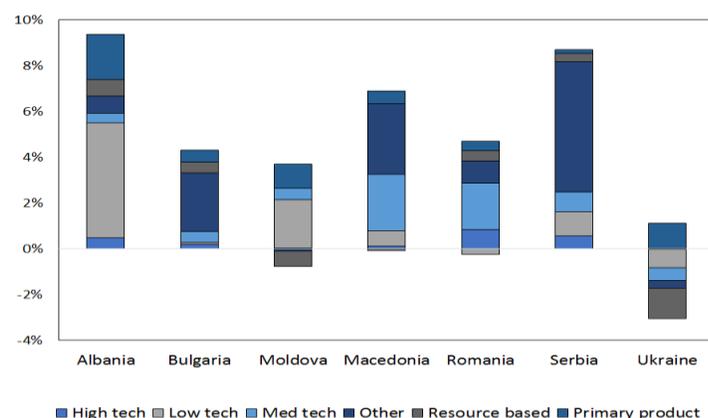
Source: World Bank Staff calculations based on WITS Comtrade database

The country has also diversified its export markets. The big shift has been in the direction of trade – away from the CIS and increasingly toward the EU (Figure 34). Beyond this, the number of markets reached by Moldovan exports increased from 74 in 2000 to 128 in 2016. Moldova was one of the countries in its comparative group experiencing a larger expansion in the number of destinations served during this period. However, Moldova is still outperformed by most of its peers, with the exception of Albania and Georgia.

Examining the change in average market share substantiates this underperformance relative to the region (Figure 35). It further highlights the reliance on food and other resource-based products to drive even these lower rates of market penetration. Looking at the change between 2006 and 2016 in comparison with other countries reveals both Moldova's relatively small increase in market share and its reliance on primary products and low technology manufactures – a contrast with the former Yugoslav Republic of Macedonia and Romania.

This may be linked to another flaw in its export performance, the fact that Moldovan products do not survive long in export markets. Moldova's export survival rates are significantly below that of comparators. The probability of a Moldovan export relationship surviving past the first year is 40 percent, and the probability of maintaining that relationship for another year falls to 25 percent. In comparison, benchmark countries exhibit a stronger performance in terms of export survival. Poland's 1-year survival rate, for example, is almost 20 percentage points above Moldova's. Only Georgia registered a weaker performance by this measure (World Bank 2015a: 16). This may be related to weather dependence and instability of export supply, reliance on undifferentiated products with limited Moldovan branding and hence lack of repeat business, or volatile shifts in bilateral exchange rates that affect prices.

**Figure 35. In Moldova, increases in market share rely on primary products and low-tech manufacturing**  
Average changes in adjusted market share (2006q2-2016q2)



Source: World Bank Staff calculations based on World Bank, Measuring Export Competitiveness database

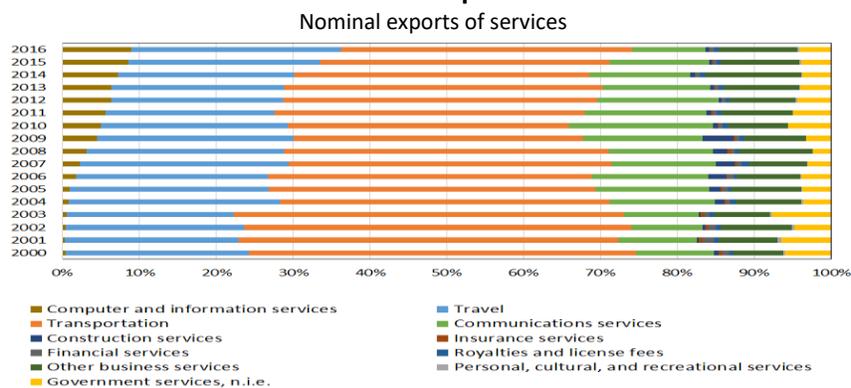
Note: Changes in adjusted market share net out effects associated with the mix of products exported and changes associated to the distribution of trading partners

### Services exports: a source of growth

Services exports have grown more rapidly than merchandise exports – rising at 12 percent annually since 2000. Their share of total export earnings rose from about 30 percent of US\$560 million in 2000 to an average of over 40 percent of more than US\$3 billion today (see Figure 30 above). Despite this otherwise remarkable performance, services exports appear to have stagnated after 2008 – and their average growth during 2009-17 has slowed to 3 percent.

Surges in software, computers, and communications have provided impressive dynamism to services exports (Figure 36). These exports capitalize on the large cohorts of technically qualified experts in computer programming and related skills. Despite recent rapid growth, the fact that other countries such as Romania have much larger shares of software and computer services exports suggests that Moldova has considerable room to expand in this market if it can adjust its educational system to take advantage of these opportunities.

**Figure 36. Computer and information services are accounting for an increasing share of Moldova's service exports**



Source: World Bank Staff calculation based on UNCTAD Service database

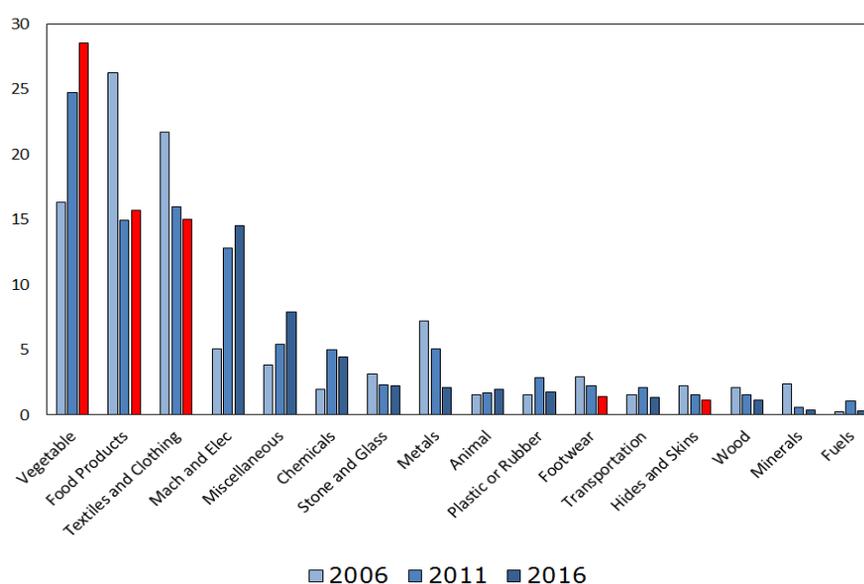
## Growth Industries of the Future: Lessons from Moldovan Successes

Reviewing weaknesses in growth performance would overlook success stories that hold the promise of substantial future growth acceleration – and provide lessons for the rest of the economy. Three common lessons run through these high potential sectors: first, they have shown that, given supportive economic policies, these sectors can generate good jobs attractive to Moldovan workers; second, their growth hinges on new innovation and technology to boost firm productivity; and third, attracting foreign direct investment as a source of capital, technology, and access to markets has had a high pay-off.

These activities merit review not only because of their recent superior performance but because they are ones consistent with areas where Moldova's has demonstrated comparative advantages. Moldova has a revealed comparative advantage (RCA) in vegetable, food, and textiles and clothing as well as in footwear and skins/hides; the red bar in Figure 37 indicates Revealed Comparative Advantages (RCAs) superior to 1 in all three years under review (2006, 2011, and 2016). The evident expansion of the machinery and miscellany categories in the country's export portfolio also indicates a strong comparative advantage. Many manufactured products from these sectors are to be found among manufactured exports in Moldova's booming FEZs.

**Figure 37. Moldova has a revealed comparative advantage in vegetable, food, and textiles and clothing, as well as footwear and skins/hides**

Share of overall Moldova's exports and comparative advantage sectors in 2006, 2011, and 2016



Source: World Bank Staff calculations based on WITS database trade indicators

Note: Red bars denote sector in which Moldova displays a revealed comparative advantage

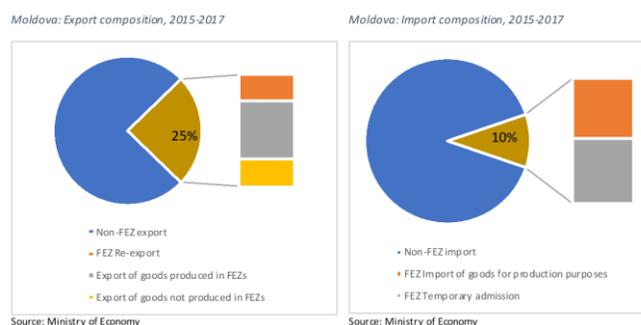
### Manufacturing: learning from the FEZs

Moldova has an opportunity to substantially accelerate its growth through trade. One of the most dynamic segments of Moldova's export portfolio has been the Free Economic Zones. Moldova began establishing free zones in 1995, but only since 2015 have they really begun to accelerate. By 2018, the country had seven zones and two industrial parks, with a legal status similar to the zones. Companies

located there receive financial benefits and legal protections, including VAT exemptions, discounted or zero tax rates depending on the activity, and 10 years of protection from legal changes. Other benefits include ease of transferring profits abroad, changing ownership titles, easier customs clearance processes, and exemptions from corporate income taxes (CIT) commensurate with the level of investment (IDC 2015).

In 2016-17, FEZs accounted for about half of all FDI inflows. These investments have contributed substantially to the rise in exports. In 2015-17, exports from the FEZs amounted to fully 25 percent of all merchandise exports, a several-fold increase in their share relative to 2006 (see Chapter 2 and Figure 38). To be sure, imports associated with the FEZs have also risen, but disproportionately less. This indicates the potential that Moldova has to plug into regional and global value chains.

**Figure 38. FEZ have contributed to increases in exports**  
Share of Moldova's exports and imports originating the FEZs, 2015-17



One reason performance is more dynamic in the FEZs as compared to the main territory is customs. Customs procedures are reported to be a constraint on productivity and competitiveness. Several recent surveys of importers and exporters (including potential exporters) yielded strong indications that logistics and customs are considered key obstacles and constraints to growth in Moldova's foreign trade, especially for exports. Lengthy customs and import

licensing procedures adversely affect firms' productivity. Each day that companies have to wait to clear customs is associated with a productivity decline of 0.5 percent. There is negative premium—or "bribe tax"—associated with corruption. Corruption has an adverse effect on firm performance and productivity. Moldovan firms that used informal payments and gifts to deal with customs procedures and with the courts had lower productivity levels than their counterparts. Specifically, firms that relied on bribes were between 6 and 7 percent less productive than their counterparts (World Bank 2015c: 57).

The experience of the FEZs suggest an important policy lesson: extending the customs and business facilitation institutions of the FEZs to the rest of the country might well unleash new forces of growth.<sup>44</sup> Indeed, while tax incentives appear to have had only a marginal influence on investment decisions, and come with a cost to the government, customs procedures and legal protection appeared to be decisive factors (see Chapter 2).

## Agribusiness and wine

Agriculture and agribusiness has been a mainstay of Moldova's export basket. Fruits, vegetables, and nuts, accounting for 5 percent of Moldova's exports during 2011-13, grew to 11 percent in 2016. Exports have grown significantly over the past 15 years, and agriculture and food processed products represent 66 percent of Moldovan exports. Raising the productivity of agriculture and leveraging export opportunities can be a driver of growth – and propel development of the SME sector.

<sup>44</sup> Other countries have learned from FEZs and expanded them to the rest of the country. For example, Mexico established its maquiladora program in 1965, at first limiting investments to within 3 miles of the northern border and coastline, and soon afterwards, expanding it to 20 miles; then in 1972 the government expanded the program to the whole country (see Hansen 1981).

With the growing connection to the EU market, the opportunity for expanding Moldovan agri-based products is unlimited. This need not be to the neglect of the CIS area, but it seems likely that dynamism will increasingly emanate from Western markets (Figure 39). The competitiveness and productivity of the sector remain low when compared with other producers around the world. Moldovan apples, table grapes, and plums fetch among the lowest unit prices of exporters in the world and have done so in both 2003 and 2012 (World Bank 2015d: 7). Most of Moldova's produce is exported to lower-value markets (for example, those with lower unit values) and competes at the lower end of these markets. A small proportion of produce is exported to higher-value markets, and but these also mostly compete at the lower end in these markets as well. Yields for fruits and vegetables in the 2007-12 period show mixed performance: yields of apples, apricots, walnuts, and vegetables are well below new EU member state comparators, and yields of wine and table grapes are comparable to some new EU member states but lower than those of CIS neighbors. This occurs despite the sector receiving major direct public support (Box 6).

#### **Box 6. Agriculture Subsidies**

The agriculture sector receives major direct public support, which was estimated at about 1 percent of GDP. Subsidies represent about 50 percent of total public support for agriculture and support both recurrent and capital expenditures, but there have been limited evaluations of their impact. Subsidies for recurrent expenditures primarily include interest rate subsidies, which can effectively be used for acquisition of agriculture inputs, and premia for agriculture insurance. Capital related subsidies include subsidies for investing in new plantation and animal bread, the acquisition of machinery (such as tractors), investments in anti-hall systems and irrigation systems, and investments in food and agricultural processing equipment. A quantitative assessment of the system has not yet been carried out. Nevertheless, qualitative evidence shows that the program has not yet reached its objective. Among recurrent subsidies, subsidies for interest on loans are disbursed mainly to large enterprises that may find alternative ways to finance their recurrent spending, and the insurance subsidy program has not stimulated a faster adoption of agricultural risk insurance (World Bank 2015). Also, subsidies for capital-related expenditures appear to not be sufficiently oriented towards innovative technologies. Investments in agriculture machinery and equipment (23.4 percent of overall capital-related subsidies) mainly relate to the acquisition of tractors or other conventional machinery (33 percent of overall units of agricultural equipment subsidized). Subsidies for conventional machinery, particularly when devoted to large-scale farmers, are likely to distort input choices since they influence the opportunity-cost of the inputs (including replacing workers with machineries or diverting investments from new technologies).

Source: World Bank Staff based on World Bank (2015).

Land policies have also affected the productivity and investment incentives in the agricultural sector. Land ownership appears to be characterized by a dual system: On the one hand, land is spread across multiple owners. On the other hand, the use of the land is spread among only a few investors. Based on the agriculture Census, Hartvigsen (2013) reports that "while smallholders operate some 99.5 percent of farms, they farm less than 39 percent of the total utilized agricultural area. Their farms average around one ha compared with an average of almost 250 ha for the larger operators who often farm on land leased in." Moreover, foreign investors cannot buy agricultural land plots. Agricultural lands can be rented by indirect methods based on the loopholes of the legal framework and some interpretations of the existing law (World Bank 2014), creating uncertainty in the investment environment.

Weather events, particularly droughts, have also increased the volatility of outputs and require major interventions, particularly on the irrigation system to ensure sustainable access to water (See Box 7).

### **Box 7. Strengthening the Irrigation System for Higher Agriculture Productivity**

Improving irrigation water services will be a key ingredient to accelerate the transition to high-value crops for export markets. Agriculture contributes 12 percent to GDP, 32 percent in employment and 45 percent to exports. However, most of exports still represent low-value crops such as oil seeds and cereals, although the area cropped and the outputs for crops such as fruits and vegetables has increased significantly since 2010. For farmers to shift and invest in higher-value crops that can deliver a consistent quality for export, a reliable irrigation service delivery will be a necessity, especially given increasing rainfall variability due to climate change and pressures on ever scarcer surface water. For Moldova and neighboring countries, a global study showed that the impact of moderate dry shocks already reduces overall yield by about 5 percent. The impact of more severe weather events, such as prolonged droughts, has a devastating effect on most crops, as occurred in 2007, 2009, 2012, and 2015. Irrigation, along with other instruments, is critical to facilitate this transition and to reduce volatility and sustain growth. Climate change will lead to changes in precipitation, temperature, and water availability due to reduced river run-off. This in turn will impact productivity, such as in the southern Nistru basin where a decrease of 34 percent for wheat and 13 percent for tomatoes and vegetables was estimated without instituting adaptation measures for climate change. Estimated annual losses in crop production were US\$20 million, assuming a catastrophic drought every seven years. Between 1990 and 2015, 11 droughts (especially in late summer) were registered in Moldova, illustrating Moldova's vulnerability to droughts (drought severity index of 2 on a scale from 0-5, 5 being worst). Floods are a recurring phenomenon and both Prut and Dniester in 2010 recorded damages to property and income equivalent to 0.15 percent GDP impact, including damages to agricultural lands along the floodplains. Adaptation and investment measures are not only necessary to mitigate the destructive potential of droughts and floods, but also to harness its productive potential by optimizing agricultural output. This will require rehabilitating irrigation infrastructure, rehabilitating and constructing water storage infrastructure, improving drainage and flood management measures, improving availability of irrigation water through better management measures at the basin level, including improving efficiency in irrigation, in urban service delivery, and through watershed rehabilitation.

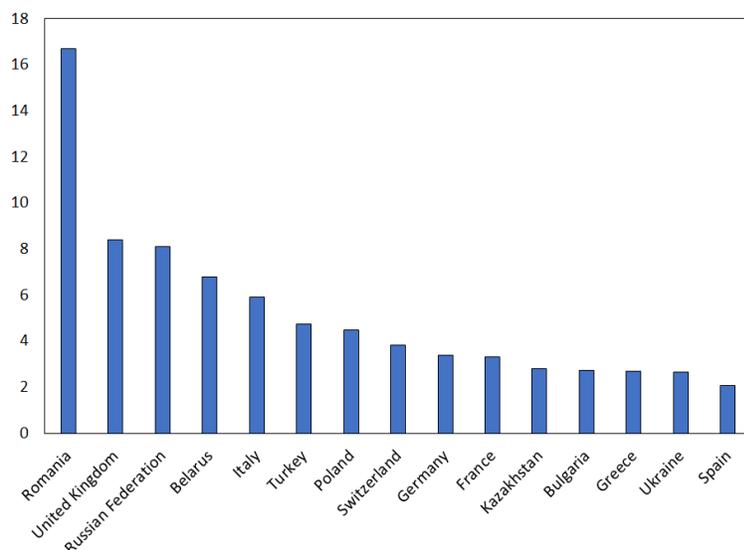
Sources: World Bank Staff based on National Bureau of Statistics (2017); World Bank *Unchartered Waters. The New Economics of Water Scarcity and Variability* (Washington, DC: World Bank, 2017); A dry shock is defined as rainfall being one standard deviation below the long-term mean. "Wet shocks" resulted in an increase of 3 percent yield; World Bank, *Climate Change Impact Assessments and Climate Change Adaptation Investment Planning* (World Bank, 2013); and World Resources Institute, (2015).

However, there are some signs of opportunity. There are approximately 115 larger farms that have the scale and ability to compete in high-value markets, and commercial agriculture enterprises have yields nearly 1.5 times the yields of small farmer/peasant households. Moldova has been successfully competing in some niche markets: it is the second-largest supplier of walnuts to the EU (after the United States) and has been able to compete in the middle range of some markets for apples (United Kingdom and Bulgaria). Its exports of organic produce are growing (World Bank 2015d).

**Figure 39. EU countries are increasingly a top destination for agriculture exports**

Average share of total Moldova's exports- top 15 main partners

(Average 2015-2017)



Source: World Bank Staff calculations based on WITS database

Note: Agriculture and food processed products (HS chapters 1-24)

In order for significant exports to the EU to become reality, Moldova's farmers and exporters will need to adhere to high product quality standards and traceability, improve the quality of packaging, and in some cases, adjust the grading specifications. Achieving these goals requires numerous actions, including: improving practices during growing and harvest; improving post-harvest handling and infrastructure; and improving the flow of market information and requirements to producers. These improvements will better position Moldova to not only compete in the EU, but also in more demanding markets (such as supermarket chains) in the CIS and in other regions (for instance, some agrifood producers have begun to explore markets in the Middle East).

The quality demanded of Moldovan

produce will only increase as retail channels (supermarkets) grow in importance in Moldova and the CIS region, and as Moldovan producers enter European markets.

One example is Moldovan wine, one of the largest components of the country's agro-based exports. In 2015, Moldova produced 130 million liters, an increase of 8 percent relative to 2013. This put it among the top 25 producers of wine globally. Still, its relatively small share of the global market (less than 0.5 percent) represents a real opportunity.<sup>45</sup> The global wine market is projected to grow by 5.8 percent during 2017-23.<sup>46</sup> Moreover, neighboring European countries account for over one-third of the global consumption of wine, and Russia accounts for another 4 percent.

Another indicator of up-side potential is the low relative unit value of Moldovan wines relative to comparator countries. Moldovan wine on average in 2013-16 brought in only US\$994 dollars per ton exported, less than half the value of Chilean wines (Figure 40). They compared more favorably with Bulgaria and even South Africa but were well below neighboring Romania.

<sup>45</sup> Trade Data and Analysis (TDA) (2018).

<sup>46</sup> Zion Market Research (April 9, 2018) (Zionmarketresearch.com)

### Box 8. Moldovan Wine: Lessons from Chile

The wine industry has been a historic mainstay of exports in Moldova. But its growth has fallen far short of its potential. It has also been overly dependent on Russia as an export market – and Russian trade restrictions have undercut its development. Diversifying its exports into the very large nearby regional markets offers a unique growth opportunity. Taking advantage of its abundant natural and locational advantages requires up-grading quality to make it more attractive to Western consumers and more assertive marketing.

Chile provides an example of a path that Moldova could follow. With industries of comparable size, the unit value of Chilean wine grew much more rapidly than in Moldova in the last two decades. Recently, between 2006 and 2016, for example, the value per liter of Chilean wine grew by 22 percent, while Moldovan wine remained at its same value. Similarly, Chilean wine production increased in volume by 26 percent, while Moldovan production actually declined by 13 percent (Anderson et al. 2018). Today, Chile is the fourth largest exporter of bottled wine in the world. Its wines can be found in the supermarkets of the United States, Europe, and China – and even in such remote markets as Rwanda in Africa. It is a major source of employment and export revenues.

The transformation of Chilean production from a boutique industry in the 1980s to an international powerhouse in this decade was the result of steady investment, progressive adoption of modern technology, welcoming of foreign direct investment, and careful attention to marketing. The government's role was central. The Chilean economic agency CORFO has a dedicated branch seeking to attract foreign firms to invest in different areas of the local industry. In 2006, CORFO'S "Innova" program launched a public-private cooperation project to support R&D with the goal of increasing the quality and competitiveness of Chilean wine in international markets. Central to Chile's success was a strong public-private partnership. A public-private partnership in the form of Pro-Chile has played a central role in mobilizing funds in the early days and in importing technology as well as in conducting international marketing. An industry public-private partnership, Wines of Chile, was formed and now works closely with the government's export promotion agency. With offices in Santiago, New York, and London, and representations in Canada, Brazil, Europe, and Asia, Wines of Chile has been active in raising the image and reputation of Chilean wines internationally through online marketing campaigns, trade and consumer fairs, organization of tastings and seminars in key markets, and innovation and quality awards. In the 2013-14 period, Wines of Chiles launched a US\$1 billion online campaign aimed at promoting Chilean wine in China. Today, China is a major market for Chilean wine, and Chinese investors have now invested in vineyards in Chilean production.

Moldova has all of the advantages of Chile, and is well positioned to replicate this experience.

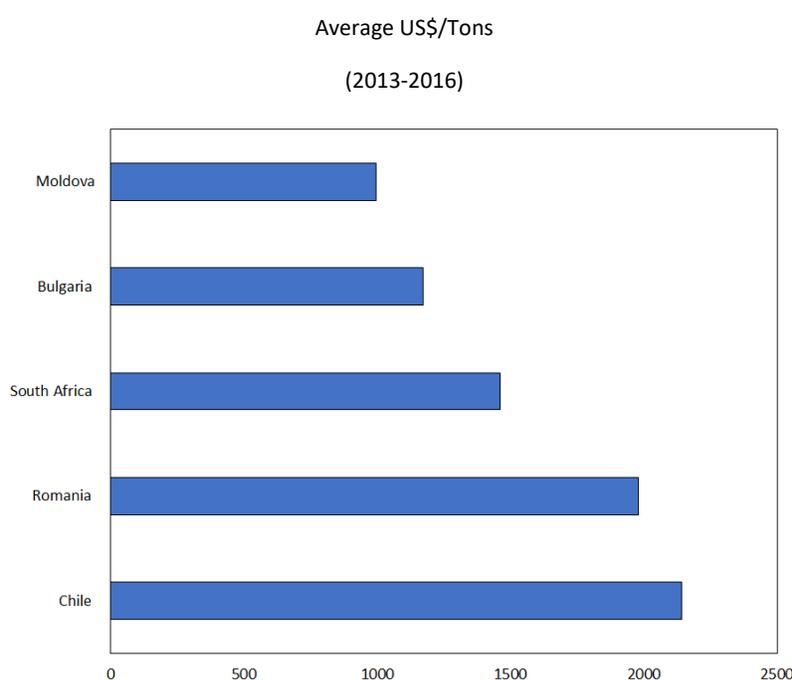
Source: Kym Anderson, Signe Nelgen, and Vicente Pinilla, *Global Wine Markets: A Statistical Compendium, 1850-2016* (Adelaide: University of Adelaide Press, 2018); World Bank, *Competitiveness in Moldova's Agricultural Sector*. Trade Note 3 (Washington, DC, 2015); Ministry of Foreign Affairs, Pro-Chile. <https://www.prochile.gob.cl/int/landing/vinos/?lang=en>.

There is every reason to believe that Moldova could replicate the experience of Chile. The industry in Chile grew from a small boutique industry in the 1980s with relatively low-quality wines to be an internationally important producer and the sixth largest producer in the world in 2015. It did so by liberalizing the industry, competitively pricing exports, and investing in improving standards in the initial stages. It then used market extension to improve grape quality and encouraged R&D to improve wine quality, often with technical support from foreign investors. At later stages, it took critical steps of

investing heavily in export promotion and country branding. Today, Chilean wines can be found in affluent markets around the world, fast-growing middle-income countries like China, and some of the most remote locations of the world, such as Rwanda (See Box 8).

In contrast, the industry in the Moldova in the last decade has stood still – underperforming the global market. In 2003, Moldova exported US\$162.7 million in wine exports; a decade later in 2013, its wine and wine exports amounted to only US\$143 million. One imperative is to figure out how to foster open commercial relations with both East and West. Russia’s sporadic bans of Moldovan exports, intended to discourage the country from closer engagement with the EU, struck hard at the industry’s heart. In 2005, wine exports topped US\$506 million (WBG 2015:22), only to later fall precipitously under the weight of Russian sanctions. By 2017, however, signs of rapprochement were encouraging on the heels of the election of Igor Dodon as President.<sup>47</sup> The diplomatic task is for the Ministry of Foreign Affairs to develop

**Figure 40. Moldova wine is priced well below potential competitors**



Source: World Bank Staff calculations based on ITC Trade-Map database

learn from competing in Europe.

### Services exports show dynamism – especially ICT

Services exports have considerable potential to be a driver of growth. This is shown in the performance and potential of three subsectors – information and communication technology (ICT), tourism, and transport.

*ICT services exports* have outpaced other services exports (Figure 36). Although tourism and transport still account for the bulk of all services earnings, these new services sectors are becoming prominent. Information, communication, and technology services exports have been a growing sector – and now constitute 9 percent of services export earnings. The ICT sector now employs approximately 22,000

open commercial relations with both its prospectively large neighboring markets.

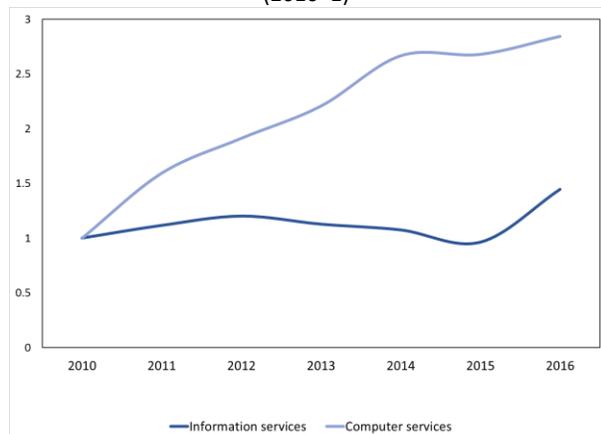
But for Moldova to duplicate Chile’s feat, it also has to please the palates of both East and West. It can only do this by beginning to change the structure of the industry – by reducing the dominant positions of state enterprises in the value chain, opening the industry to foreign investment, incorporating sophisticated new technologies in production, and engaging in vigorous export competition with the wine producers of Europe. Just as Chile learned from competing in the United States market, so too can Moldovan wine producers

<sup>47</sup> See Amie Ferris-Rotman, “Winemakers in Moldova eye thirsty Russian market,” *Politico* (2017) May 4.

workers (Raja et al. 2018), and net export earnings from services exports of information, communication, and technology reached US\$78 million in 2016 (Raja et al. 2018). In addition, the spillover effects with other sectors – financial and business services, health care, and tourism, to name a few – are likely to be an important driver of productivity.

**Figure 41. Exports of other computer services tripled in the past six years...**

Nominal exports of information and other computer services (2010=1)

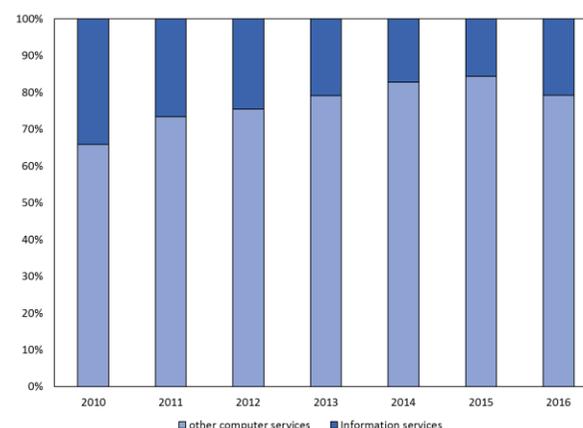


Source: World Bank Staff calculation based on UNCTAD Service database

Note: Other computer services include software and data processing services

**Figure 42... and by now represents 80 percent of the exports of the information and other computer service sector**

Exports of information and other computer services



Moldova compares well with other Central and European Countries in developing a talent pool of skilled IT professionals, including software engineers, analysts, developers, and project managers. According to an IDC study (2015), “Moldova is particularly well positioned for core activities, such as web development and basic coding, and high value activities, such as analysis and design and software development and testing.”<sup>48</sup> Moreover, its universities are turning out math and science majors at about twice the rate as a proportion of graduates as Hungary, Bulgaria, Slovenia, and Romania (see also Chapter 5).

The government has promoted the industry in other ways as well. It offers a favorable corporate tax regime, access to privileged tax rates, and infrastructure in the Free Economic Zones. In addition, it has created virtual IT parks, incentives to spur software development, tax programs to discourage specialists from migrating abroad, and specialized training programs. The corporate income tax rate for IT and communication companies is now 12 percent as compared to 15-20 percent in the Czech Republic, Hungary, Romania, Croatia, and Slovenia. Its incipient industry, with a mastery of several European languages, serves Europe, Russia, and the CIS countries, and even North America (IDC 2015). The country has above-average connectivity and ranks 37th worldwide in internet speeds.<sup>49</sup>

To realize the promise of its incipient comparative advantage in ICT, key issues that need to be addressed include skill constraint and up-grade of its ICT related education and simplification of labor law. In this respect, the recently approved “startup visa law” is a positive step in this direction but “private sector stakeholders remain unsure about its acceptance by international workers” (Raja et al. 2018).

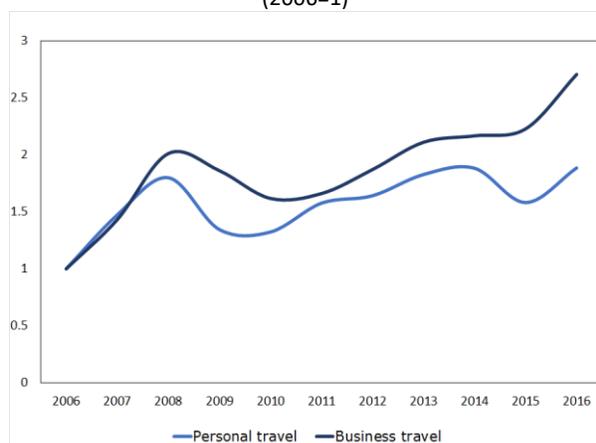
<sup>48</sup> IDC CEM Research, “Moldova Moving into the Premier League of IT Nearshoring” (2015) #CEMA22452.

<sup>49</sup> Tests run on Speedtest for July 2018., <http://www.speedtest.net/global-index/moldova>

*Tourism* is another sector that has potential to grow. To date, Moldova has barely tapped its potential to grow its tourism industry. The country ranks lowest in the region in tourist arrivals and tourism's contribution to GDP (see WTTC, 2018). Earnings growth has been feeble. Nonetheless, it has assets that are underexploited. The wine industry alone has the capability of bringing in numerous aficionados looking for the new, next big thing. That said, the industry has a long way to go to improve its offerings. As of November 2018, none of the hotels listed in Trip Advisor show a full score and reviews are limited.

**Figure 43. Service exports of personal travel have doubled in nominal terms between 2010-2016...**

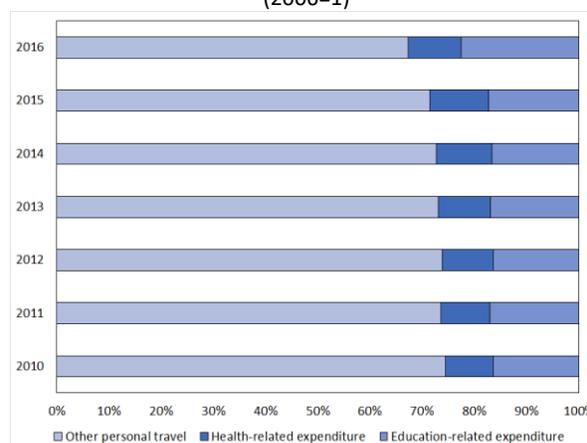
Nominal exports of travel services  
(2006=1)



Source: World Bank Staff calculation based on UNCTAD Service database  
Note: Split of personal travel services not available during 2006-2010

**Figure 44... and mainly represents tourism service exports**

Nominal exports of personal travel services  
(2006=1)



*Transportation* provides the lion share of services exports. Its potential is evident simply looking at its geographic location between two of the world's largest markets, the EU and the CIS. However, to date, transportation services exports have not kept up with the relatively rapid pace of ICT exports, and to the contrary, they have leveled off in absolute amounts in recent years. This may be associated with re-exports to the CIS countries, themselves undergoing a period of slow growth.

Re-exports are one driver of increases in transport services. According to the World Bank's Trade study, the largest portion of re-exports go to Russia – constituting about half of all re-exports in 2013 (Figure 45). Trade going the other direction was also important, and Romania was the second largest destination (with roughly 12 percent).

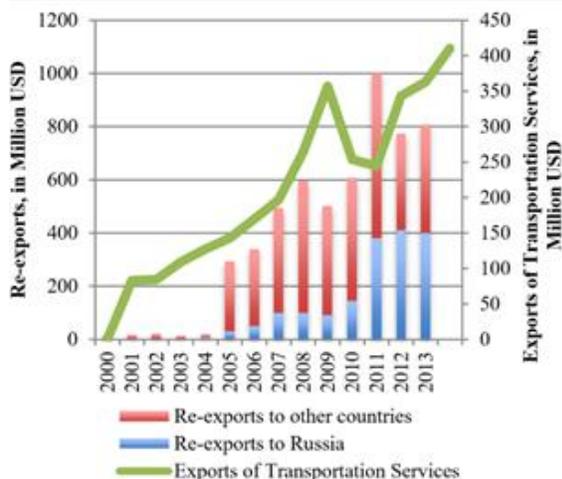
Yet a recent trade corridor study financed by USAID (2018)<sup>50</sup> reveals the need for major reforms of the institutional settings and related to infrastructure developments. As reported in USAID (2018), currently, road transport comprises the majority of Moldova's trade. However, time-consuming delays constrain not only trade performance, particularly for perishable goods, but also the ability to participate in value chains, which are generally characterized by just-in-time production.

<sup>50</sup> USAID *Moldova's trade corridor assessment* (2018).

This is particularly the case in border crossings to Romania. Moreover, Moldova's roads need rehabilitation, and the railway needs significant track maintenance and rehabilitation and improved

**Figure 45. There is a positive correlation between exports of transport services and re-exports**

Relationship between export transportation and re-export



Source:

framework. Other factors include delays in procurements and construction, and also the lack of proper regulations, or poor enforcement of existing regulations, such as those related to the common problem of overloading trucks (USAID 2018).

## Policies and Organization of the Study

Accelerating growth requires policy initiatives that improve the investment climate, the industrial organization of the enterprise sector, and incentives fostering improvements in productivity. Improving the investment climate includes, for example, maintaining macroeconomic and financial stability, protecting property rights, and improving the efficiency and probity of public finance. A second area, centered on the enterprise sector, concerns industrial organization, particularly policies toward state enterprises and foreign investment. A third level involves incentives external to the enterprise that most directly affect the enterprise performance, namely the strength of competition in markets, incentives implicit in the tax policy framework, and policies to increase the skill levels of the work force (arguably the most important input into the productive process).

The Overview has presented the main recommendations that emerge from this chapter along with summaries of policies from the chapters that follow. The rationale for policy changes to attract – and deploy more strategically – foreign direct investment is the subject of the next chapter. Chapters 3 and 4 deal with competition and tax policy. Chapter 5 focuses on skills and higher education.

rolling stock. The state of the roads and railways also affect the access to the Ukrainian ports of Odessa and Chornomorsk and to Moldova's own river port at Giurgiulești. The latter port is also affected by poor access via inland waterways and possibly also by the domination of the port by a single large shipper. Finally, the cargo terminal of the Chisinau International Airport would need significant upgrading, and the other two Bălți-area airports are not ready to handle traffic in their current conditions with both airports having significant investment needs ranging from runway lighting to runway or terminal development. According to the study, the current situation ranges from lack of available funds, to misuse or inefficient use of funds (see the recent Road Fund audit report), along with a lack of private sector investment due also to the need to improve the public-private partnership

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## Chapter 2: Realizing the Potential of Foreign Investment

### Introduction

Foreign firms in Moldova are among the most productive in the economy. As shown in Chapter 1, on average, their productivity is about 60 percent greater than domestic private firms and more than 80 percent greater compared to state-owned enterprises. Their share of the economy has been growing, and they have been a driver of productivity gains and rising incomes since the beginning of the reform period.

Governments throughout Central and Eastern Europe have used FDI as a pillar of their restructuring and modernization efforts. Why? The most common discussion focuses on FDI capital inflows. In fact, it is multinational corporations' (MNCs) new technology, managerial innovations, and competition in domestic industry that drive most productivity gains. Moreover, multinational corporations bring access to foreign export markets – and their networks have been central to the expansion of global value chains (GVCs).<sup>51</sup>

However, these benefits are not automatic. First, a country needs to attract FDI in sufficient amounts to affect productivity increases. Second, a country has to have a policy framework that will maximize domestic linkages while ensuring that competition and regulation discipline any private restrictive business practices.

This chapter examines the role of FDI in Moldova, looking at the country's attractiveness to investors and investment promotion on the one hand, and its investment policy framework on the other. The first section of this chapter looks at patterns of FDI in Moldova. It concludes that despite the important contributions made to increases in productivity, exports, and job creation, Moldova has so far not realized the potential of FDI as a driver of productivity growth and economic development. While Moldova has attracted FDI in several sectors, FDI volumes have decreased sharply over the past 10 years. The share of FDI inflows in GDP was 2.63 percent in 2017, one of the lowest in the Eastern European comparator group. Moreover, a large share of FDI attracted was in low technological segments of GVCs. Finally, technology transfer to the domestic economy through vertical and other indirect linkages has remained low. The second section elaborates on policies in six areas that would enhance FDI's contribution to the Moldovan economy: strategy, investment promotion, investor incentives, reducing barriers to foreign entry, strengthening investor protections, and promoting vertical linkages.

### Moldova's FDI Performance

#### Investment stocks...and diminishing flows

FDI have been on rise in the period before the financial crisis but have been decreasing consistently ever since, ultimately contributing to the overall decline in private investment.<sup>52</sup> Along with Bulgaria, Moldova saw the highest FDI inflows (as a share of GDP) before the financial crisis (Figure 46). After reaching a peak in 2007 at 12 percent of GDP, Moldova's FDI inflows dropped substantially from 2009 onwards to 4 percent of GDP in 2009 and falling further to reach 2.17 percent of GDP in 2016, the third lowest in the comparator group<sup>53</sup> and performing slightly higher than Slovak Republic (-0.33 percent of GDP) and Bulgaria (1.56 percent of GDP). In 2017, Moldova's FDI as a percent of GDP recovered slightly to 2.63 percent. The decline has been exacerbated by the billion-dollar fraud scheme that occurred in 2013-15 in

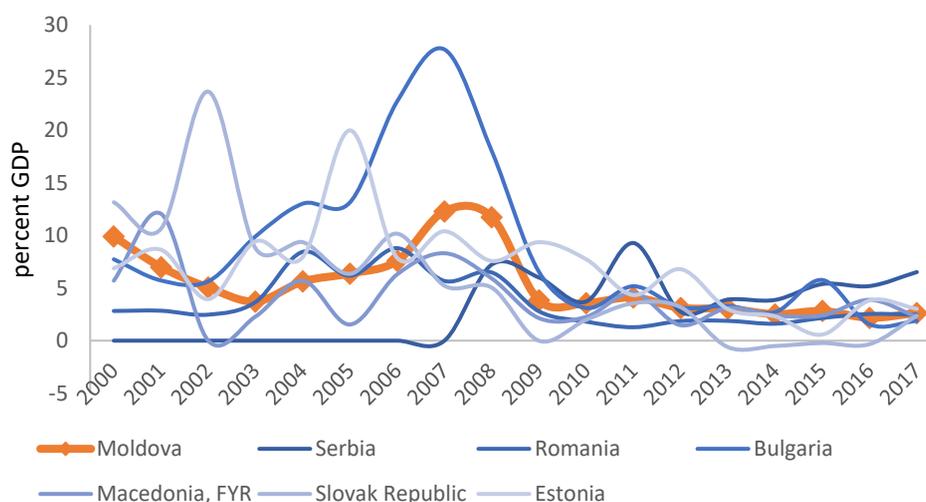
51 See WTO, World Bank 2014; see also Sutton, et al. 2017

52 A threshold of 10 percent or more of the ordinary shares of voting stock is applied to determine the ownership of a foreign direct investment.

53 Throughout this section, the following comparators were selected for analysis: Serbia, Romania, Bulgaria, FYR Macedonia, Slovak Republic, and Estonia. This group of comparator countries was selected as they (a) constitutes important comparable peers for FDI in the region and (b) were noted to be the same group of countries often requested by the CEM team for analysis.

the banking sector and which has tarnished the international reputation of the economy and squeezed the financial sectors for what may be years to come.

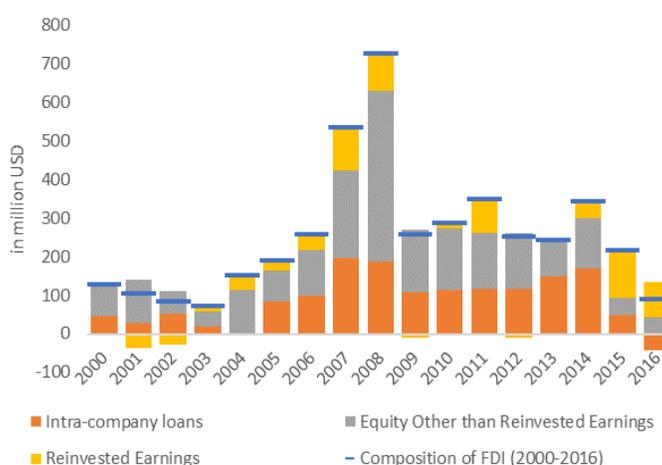
**Figure 46. Total FDI Inflows: Moldova vs. Comparators (2000-17)**



Source: FDI Snapshot using UNCTAD

Moldova's FDI composition has also changed during that time, which suggests an even greater paucity of new FDI. Shares of intra-company loans and equity, that is a foreign direct investor's purchase of shares of an enterprise in Moldova, have been decreasing since 2008 while reinvested earnings have grown and turned to major FDI components in 2015 and 2016, although this increase has by far not sufficed to compensate for the decline in the other two components (Figure 47). Overall, the marked gap in Moldova's FDI performance with respect to comparators, and the gradual decrease in FDI over the last 10 years, suggests that significant reform efforts will be needed to grow FDI using both new investments as well as reinvestments.

**Figure 47. Moldova's Composition of Inward FDI Flows (2000-2016)**



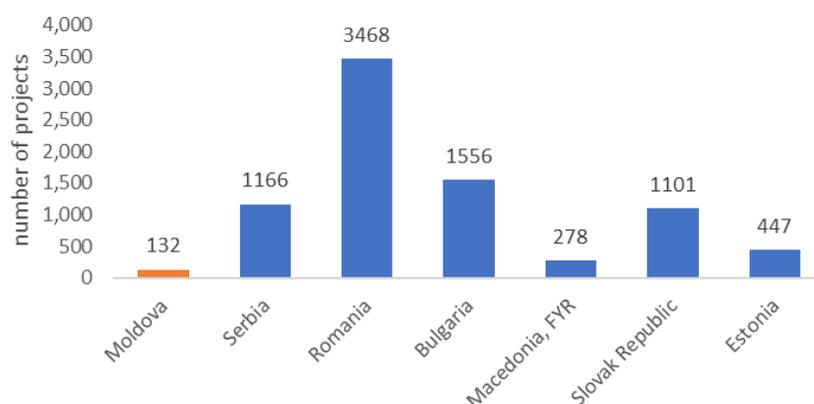
Source: FDI Snapshot using IMF BoP.

With respect to greenfield FDI,<sup>54</sup> Moldova has received the lowest number of projects within its comparator group. Since 2003, Moldova received only 132 greenfield projects, which is less than half of

<sup>54</sup> There are two types of FDI projects: mergers and acquisitions, and greenfield. Broadly speaking, mergers and acquisitions investments refer to the numerous types of transactions that occur as companies merge and acquires assets. On the other hand, greenfield investment projects are brand new foreign investment projects in a country. Thus, greenfield investments provide a

that received by the second lowest recipient in the group, FYR Macedonia, and only a small fraction of the 3,165 projects received by Romania, the highest recipient of greenfield projects within the comparator group (Figure 48). These figures suggest that over the last 14 years, Moldova has performed much lower than its comparator group when it comes to attraction of greenfield investments, a missed opportunity for its economic development.

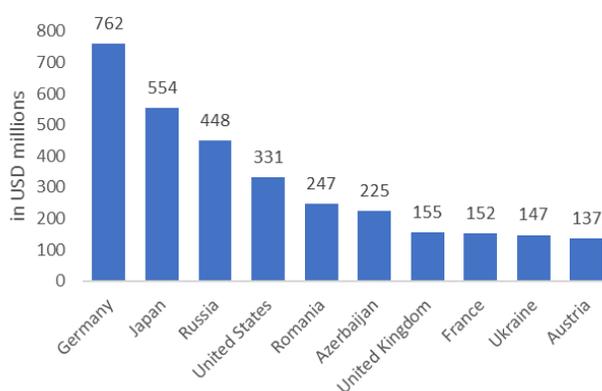
**Figure 48. Number of Greenfield FDI Projects: Moldova vs. Comparators (2003-2018)**



Source: FDI Snapshot using Financial Times fDi Markets.

The top sources of greenfield FDI projects to Moldova have been Germany, Japan, the Russian Federation and the United States (Figure 49). The majority of greenfield investments from Germany have been in the automotive component sector, as well as industrial machinery, equipment, and tools. Additional research on overall FDI stocks finds that Russia and Cyprus account for a total of 40 percent of total FDI stock in Moldova, indicating that this FDI most likely represents recycling of domestic flight capital and possibly also tax evasion. It is likely that parts of this FDI are not particularly conducive to an upgrading and modernization of the economy towards EU standards and successful restructuring.<sup>55</sup>

**Figure 49. Top Source of Greenfield FDI for Moldova (2003-2018)**



Source: Financial Times fDi Markets

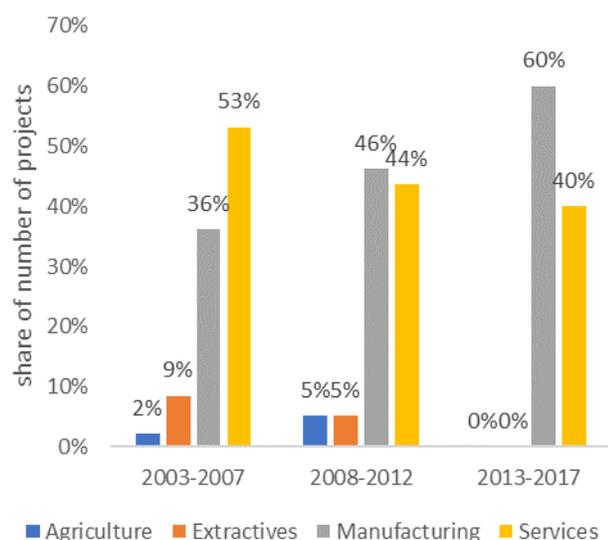
good measure of the entry of new FDI in a country across time. For this reason, this note presents only greenfield project data for sectoral and project analysis.

<sup>55</sup> Havlik et al. (2018).

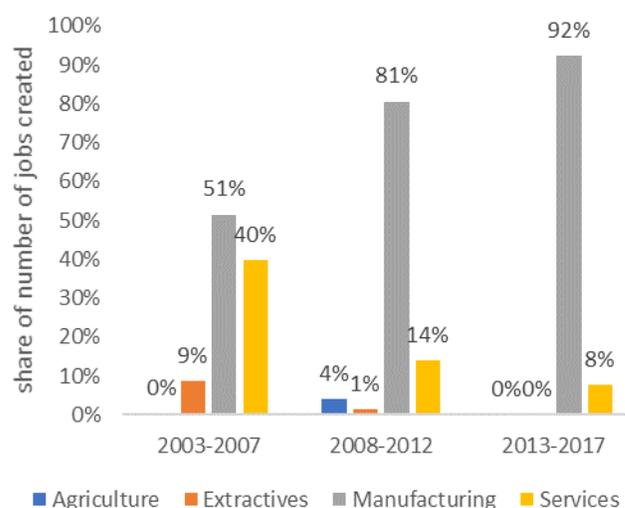
## Sectoral Trends in Foreign Direct Investment

Moldova's greenfield FDI projects were concentrated in the services sector. However, in terms of the amount of new jobs created by FDI, the greatest contribution was made in the manufacturing sectors. Over the last 15 years, Moldova has attracted an average of 46 percent of greenfield projects in the services sectors<sup>56</sup> (Figure 50). Greenfield projects in the manufacturing sector have grown from 36 percent to 60 percent of total projects over the same period. Projects in agriculture increased from 2 to 5 percent initially, before disappearing (along with extractives projects) in recent years. The bulk of jobs were created in manufacturing sectors, and between 2012 and 2017 alone, nearly all of jobs created were in manufacturing sectors (Figure 51).

**Figure 50. Share of Greenfield FDI (# of projects) by Sector (2003-2017)**



**Figure 51. Share of Greenfield FDI (# jobs created) by Sector (2003-2017)**



Source: FDI Snapshot using Financial Times fDi Markets database.

During 2012-17, the most important services sectors receiving FDI included construction (19 percent), IT services (6 percent), and financial and health sectors (8 percent each).

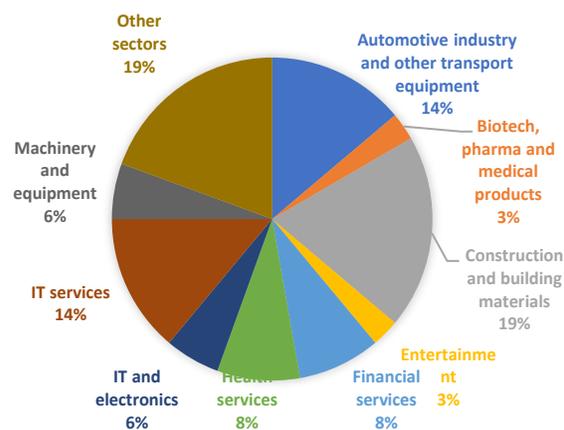
The automotive industry (14 percent) was the most important goods sector. Despite being Moldova's largest primary sector, greenfield FDI to agriculture has been very limited in recent years (Figure 52). The recent trend of investment in the automotive sector will likely continue. For example, the FEZ in Balti has so far attracted US\$160 million with expected further investment of US\$270 million in the next two years.<sup>57</sup>

Moldova has attracted a relative high share of investment into the services sector. Estimates based on the FDI markets database – that quantifies the number of projects – suggest that more than 64 percent of greenfield projects in Moldova between 2012 to 2016 were market-seeking investments, followed by 29 percent efficiency-seeking investments, and about 2 percent shares each in tourism and natural resource-seeking investments (Figure 53). Services investments include retail trade, business services, car parts, and financial services. Efficiency-seeking investments have been in cables, beverages, and IT services. The natural-resource seeking FDI that Moldova has received has been in agricultural subsectors.

<sup>56</sup> Due to data limitations, this is estimated using number of projects, not size of projects.

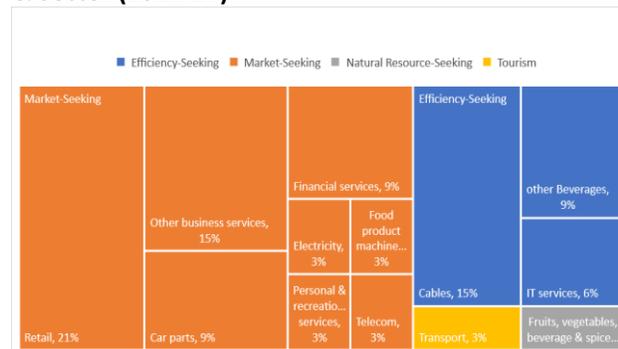
<sup>57</sup> Data obtained from Free Economic Zone of Balti in June 2018.

**Figure 52. Moldova's # of Greenfield FDI Projects by Sector (2012-17)**



Source: FDI Snapshot using Financial Times fDi Markets database.

**Figure 53. Share of Moldova's Greenfield FDI by Type & Sector (2012-17)**



Source: FDI Snapshot, computation based on COMTRADE and fDi Markets data.

Note: The 'Investment Typology', as pioneered by scholar John Dunning, demonstrates that different types of investment are driven by varying investor motivations.

More than a half of the efficiency-seeking FDI is concentrated in low-complexity production activities. The assembly of cables for the automotive sector, which are at the bottom of GVC segments in particular, dominated the FDI mix. Accordingly, insulated wire exports are the most important export item of Moldova but also one with a very low complexity.<sup>58</sup> Other top export items in Moldova are sunflower seeds and wheat, primary products with low complexity. On the bright side, Moldova has seen investment announcements in high value-added IT services, including computer programming and consultancy. Growing FDI into high value-added services, such as ICT, but also up the value chain of the automotive sector and in related sectors such as electronics will be important for Moldova's economic growth going forward.

### Economic Diversification and Complexity: A Modest FDI Contribution

Most developed countries are characterized by a productive transition that prioritizes complex products.<sup>59</sup> However, countries with a high concentration of their economic activity in relatively unprocessed exports with little value addition may face limitations to their development.<sup>60</sup> These can arise through various mechanisms, from deteriorating terms of trade, export earnings volatility,<sup>61</sup> Dutch disease problems,<sup>62</sup> or poor quality of the institutional environment.<sup>63</sup>

Moldova's exports became slightly more diversified in the second half of the 2000s, but the trend abated in the most recent years. In 2016, the country was able to export with revealed comparative advantage in 122 out of 770 tradable industries. This is a level of diversification in line with FYR Macedonia but significantly below that of other comparators. At the same time, the country's overall mild increase in export diversification has not been translated into an increase in the complexity of the country's export basket. In fact, complexity decreased from 1990 to the present, dropping from 0.5 to -0.3, similar to FYR Macedonia, and again, significantly below the level of all other countries in the region. In this way, the analysis reveals a deterioration of Moldova's export specialization in relative terms. Moldova has lagged

<sup>58</sup> 814th most complex product according to the PCI. Observatory of Economic Complexity.

<sup>59</sup> Abdon et al. (2010).

<sup>60</sup> Prebisch (1950).

<sup>61</sup> Easterly and Kraay (2000).

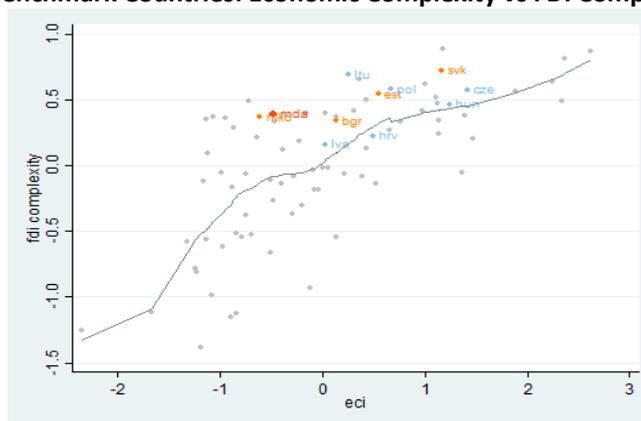
<sup>62</sup> Corden and Neary (1982).

<sup>63</sup> Sachs and Warner (1995); Ross (2001); Collier and Hoeffler (2005).

in the development of complex industries relative to the rest of the world and registers a relatively low Economic Complexity Index (ECI) value among the country benchmarks used in the analysis. There is a sizable gap between itself and Romania.

FDI in tradable sectors has been primarily gone into industries of moderate complexity. Moldova's FDI complexity index,<sup>64</sup> which is a weighted average of the Product Complexity Index (PCI) associated with industries where there is FDI activity and hence a measure of how much FDI has contributed to overall economic complexity, stands above both the global average and the level suggested by the country's ECI (Figure 54). This is a common feature observed in most of the comparators. In all, the findings suggest that FDI in Moldova, has made a positive but limited impact on export upgrading of the productive structure of the economy.

**Figure 54. Moldova vs Benchmark Countries: Economic Complexity vs FDI Complexity, 2016**



Source: World Bank Staff elaboration based on COMTRADE and Atlas of Economic Complexity.

### ***The role of FEZ: a source of dynamism, if with few spread effects***

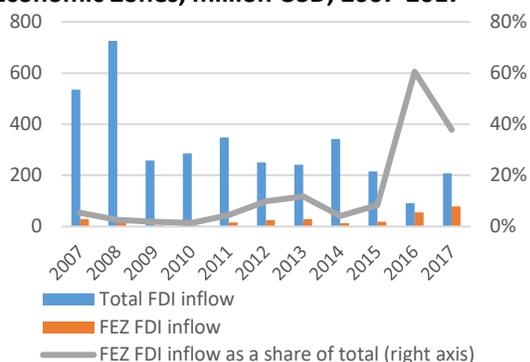
The Free Economic Zones (FEZ) regime has been and continues to be an important instrument for attracting investment in Moldova. FEZ were first established in 1995 with the aim of spurring economic growth by attracting domestic and foreign investment, promoting exports, and creating jobs. There are a total of seven zones in the country. While the net inward FDI position of the country had increased marginally by US\$27 million (from US\$2,584 to US\$ 2,611 million) between 2009 and 2016, the cumulative inward investment value in FEZ in the same period was US\$165 million.<sup>65</sup> This speaks to the significance of the FEZ regime to the economy in terms of attracting investment.

During the years characterized by a stagnation in investment, the FEZ attracted a steady stream of investment, in particular in manufacturing, and created additional jobs. Figure 55 shows the trends of FDI inflows in the FEZs from 2009 to 2017. While there had been a decline in total FDI inflows in the country as a whole, FDI inflows in the FEZs had been increasing. In 2017, they registered a sizable amount of almost 80 million USD, a large jump from the previous year, signaling a rebound in investment activities, and the FDI inward stock position in the seven FEZs reached 10 percent of the total FDI stock. International brands such as Draexlmaier, Lear Corporation, and Gebauer and Griller, contributed to increasing the assets in the zones. The number of jobs created by FEZ has been rising steadily, even in times when national employment levels were sinking, and reached almost 12 thousand according to national statistics (Figure

<sup>65</sup> Calculations are based on data from national sources and IMF CDIS.

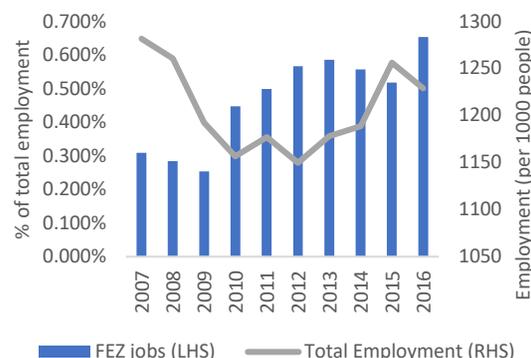
56). According to the Balți FEZ authority, the zone on its own created 6,300 jobs by the end of 2017 and with new projects in the next two years, it is expected to create up to 15,000 jobs.<sup>66</sup>

**Figure 55. Moldova: FDI Inward Flows in the Free Economic Zones, million USD, 2007-2017**



Source: IMF BOP statistics; National Authorities

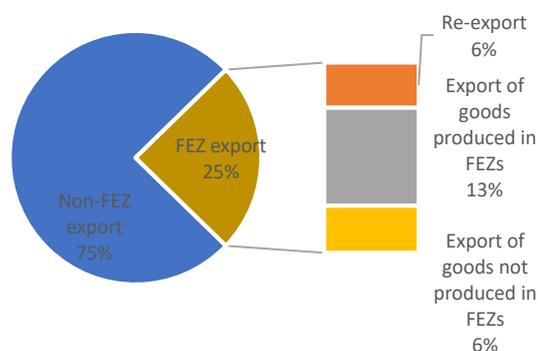
**Figure 56. Number of jobs created in the Free Economic Zones, 2007-2016**



Source: Ministry of Economy

Between 2015 and 2017, FEZ have contributed to 25 percent of Moldova's exports, and 10 percent of the country's imports. FEZ have generated a current account surplus of US\$239.5 million, against a current account deficit of US\$6,641.6 million generated by the rest of the economy during the same three-year period. Out of the 25 percent share of exports, 13 percent consisted of production in the FEZ, 6 percent of re-exports and 6 percent of exports of other goods not produced in the FEZ but purchased in the rest of Moldova, such as packaging materials (Figure 57). While statistics on sectoral breakdown of FDI in FEZ are not available, information provided through interviews with international investors in Ungheni, Balti, and Expo-Chisinau suggest that the typical export-oriented FDI sectors, that is cables, beverages, and IT services, are prevalent in FEZ, the free port, and the IT Park.

**Figure 57. Moldova: Export composition, 2015-2017**



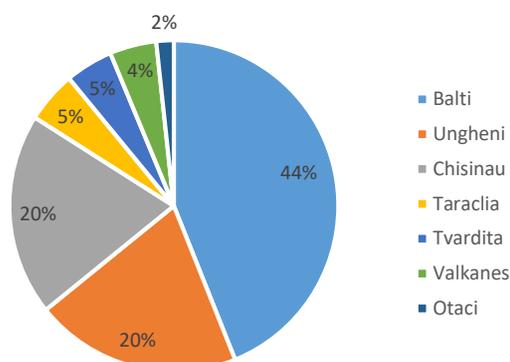
Source: Ministry of Economy, Moldova.

The performance of the seven zones, however, differs in size and industrial output. The largest zone by investment value (Balti) is over 20 times bigger than the smallest zone (Otaci) (Figure 58). As such, their industrial capacity also differs. Figure 59 compares the ratio of industrial output, measured by sales in local currency, to investment stock, also valued in local currency, to shed some light on the relative

<sup>66</sup> Data from the Free Economic Zone of Balti.

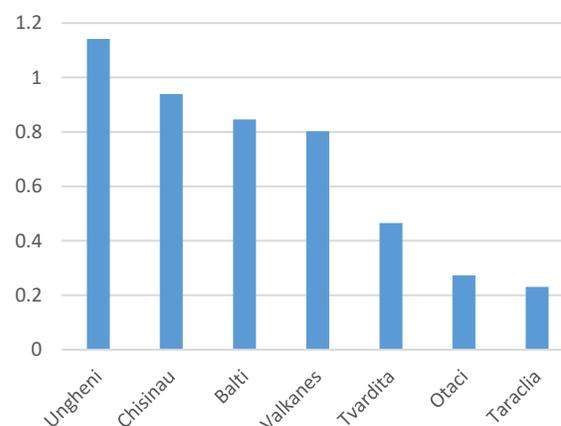
efficiency of the zones. In general, the larger zones tend to have a higher output-to-input ratio, which conforms to the conventional view of economies of scale.

**Figure 58. Comparison of Free Economic Zones by investment stock, 2017**



Source: Ministry of Economy, Moldova.

**Figure 59. Comparison of Free Economic Zones by ratio of industrial output to investment stock, 2017**



Source: Ministry of Economy, Moldova.

## The Investment Reform Agenda

### Revisiting the FDI strategy: harnessing the productive power of FDI

The National Investment and Export Strategy 2016-2020 of the Republic of Moldova has gone a long way in identifying seven priority sectors for FDI. Beyond this, the government should give consideration to how it could attract more FDI and prospectively use FDI as means of economic upgrading, along with maximizing the current FDI benefits. Several aspects of Moldova are attractive to investors. These include: locational advantages of access to the CIS and EU markets via the duty-free regime; the FEZ regime itself which offers 24/7 customs office on site; a 10-year state guarantee on legislation changes; and in some cases likely corporate income tax (CIT) and VAT incentives. To further boost ICT investments and exports, the government recently established the Information Technology (IT) Park to attract FDI in IT and electronics sectors, as well as a range of R&D activities.<sup>67</sup> In addition, the country has also benefited from the availability of low-priced labor with a range of skills. To be sure, average individual wages have been rising gradually from US\$195 in 2011 to US\$298 in 2017.

Moldova may wish to look for new sources of competitiveness which are intimately linked to technology adoption. Moldova's new value proposition for investors could be increasingly tailored to attract more knowledge-intensive business activities, as well as those offering a higher linkages potential.

#### *An FDI Scan can help identify obstacles and opportunities*

To formulate a more in-depth strategy, the government could undertake an "FDI scan" to update opportunities for subsectors, identify specific policy-amenable obstacles, and design specific institutional interventions that would make each sector more attractive to outside investors. An FDI sector scan to identify new niches for investment with higher technology and skill content, and potential for linkages, as opposed to labor-intensive investments, would be a useful exercise. What is also critical at this stage is to move from a reactive "open door" policy regarding FDI to a highly proactive "knocking on the right doors" policy to attract the types of investments that can add the most value. This does not mean that Moldova

<sup>67</sup> Moldova IT Park. <https://moldovaitpark.md/en/home-english/>.

should neglect investment in the traditional sectors, which can be promoted through a range of horizontal and sector-specific reforms. But its proactive investment promotion efforts could best be targeted to areas that are most aligned with its economic development objectives and strategies, including growth in exports and creation of high value-added jobs. Annex 2 on investment competitiveness benchmarking (ICB) illustrates how this might be applied.

### ***Learning from FEZs***

Zones have been quite successful in attracting FDI and generating jobs in Moldova. Going forward, the focus should be on learning from their successes, applying certain aspects of their policy regime to the rest of the economy, and developing market-friendly supplier development programs to deepen linkages. FEZ conditions could be introduced at a national level. Moreover, one of the main differences between zone programs that have been successful and sustainable and those that have either failed to take off or have become stagnant enclaves is the degree to which they have been integrated in the broader economic policy framework of the country and have received support for domestic investment into the zones that can promote linkages, training, and upgrading. Unlocking the potential of zones will require a strategic integration of the program along with carrying out the overall investment policy of the country. Consideration should also be given, as part of the FDI sector scan, to identify a subset of the sectors and subsectors for which the zone conditions would provide an advantageous setting, and which could promote more FDI volumes, jobs and sales, all the three key performance indicators for zone authorities. In particular, focusing on a subset of niche sectors and subsectors with higher technology and skill content and potential linkages should be at the forefront of the new approach for Moldova's zones.

### ***Enhancing government capacity to implement strategies***

The Ministry of Economy (MoE) is responsible for maintaining a favorable investment climate. Its priorities include: improving the business environment; increasing economic competitiveness, particularly in light of the implementation of the DCFTA; and modernizing the infrastructure to attract larger FDI inflows. A new investment agency has been recently approved in the government that has the task to contribute to economic growth through increasing the level of foreign investments, increasing exports' volume, and developing tourism (see section on "Upgrading Investment Promotion"). However, the MoE department in charge of business and investment environment topics, including FEZ policy, has only five permanent staff, and only one staff member in charge of investment. The development of a cadre of specialists within the MoE would enable the ministry to undertake policy analysis on the contribution of FDI to the economy, conduct economy-wide and sector-specific impact assessments, assess the economic efficacy of state support measures, and develop a comprehensive monitoring and evaluation system for its investment policy.

### **Upgrading investment promotion**

Investment promotion is critical for successful attraction of FDI. Well-organized and proactive investment promotion agencies have been shown to boost FDI and be cost effective.<sup>68</sup> Investment promotion agencies (IPA) that target specific sectors for investment promotion are particularly successful and can increase the quality level of exports from a host country.<sup>69</sup>

However, Moldova's efforts at investment promotion have fallen short of potential in several areas. A survey of 92 entities<sup>70</sup> conducted in June 2013 demonstrated that the IPA services in Moldova were largely underutilized by investors in the country and required improvement. Nearly 75 percent of investors

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<sup>68</sup> Harding and Javorcik (2011).

<sup>69</sup> Harding and Javorcik (2011 and 2013).

<sup>70</sup> Entities included: 82 existing investors, 7 – potential investors and 3 – lost investors. Magenta Consulting Survey (2013).

surveyed indicated that their awareness of investment opportunities in Moldova came from personal relationships, recommendations of other investors, or a research/consultancy suggestion for the strategic direction of their firm. Only 11 percent became aware of investment opportunities from the government, and these came specifically through forums that included business participation.<sup>71</sup> Subsequent interviews conducted in 2016 revealed limited satisfaction with investment promotion efforts of the IPA.

Firms that were interviewed indicated that the IPA was previously more proactive but does not offer significant value to medium-sized and larger firms. This appears to show a lack of improvement over the period from the initial 2013 survey.

An institutional effectiveness evaluation of the Moldovan Investment and Export Promotion Organization (MIEPO), which until the end of 2017 served as the national investment promotion agency, suggested several important weaknesses related to governance, staffing, budget, and core investment promotion functions. Given the absence of an effective IPA, investment promotion operated on a reactive as opposed to a proactive basis, leading to lost investment opportunities. The same applies to FEZs which do not have an explicit investment promotion mandate, and that implement investment promotion activities on a voluntary basis. Some zones such as Balti and Ungheni appear to offer basic information and facilitation services, although, investor outreach, for example, is fully absent leaving the zones dependent on investor-initiated interest.

### ***A new investment promotion agency is a high priority***

The recent approval by the Cabinet of the law on the new Investment Promotion Agency is a welcome step since it offers a renewed opportunity to upgrade Moldova's investment promotion. The agency has been set up through the merger of MIEPO and the Tourism Agency. The new entity has been given the task of contributing to economic growth through increasing the level of foreign investments, increasing the exports' volume, and developing tourism. Thus, the duties of the agency include promoting Moldova's image for the attraction of foreign investments, giving attention to investment aftercare, promoting exports and tourism, and strengthening the economic diplomacy. The agency staff limit is set at 30 and has already begun operations.

The process of upgrading the agency should involve the following steps:

1. Establishment of the board of such an agency, which should preferably comprise at least 30 percent representation from the private sector;
2. Adoption of a new 3-5-year corporate plan that sets explicit and quantifiable impact objectives that relate directly to Moldova's priority FDI sectors and subsectors, and an allocated budget sufficient to be able to deliver on the strategy; and
3. Implementation of the plan, which includes building investor-servicing capabilities.

The adoption of the corporate plan with sufficient allocated budget will be a key milestone for decisions on how to pace the specific interventions because it will define strategies and activities for the rollout of investor services.

In addition, experience suggests that a good corporate plan typically contains:

- A statement of the long-term vision
- Quantitative and qualitative objectives within a defined period

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<sup>71</sup> Investors indicated that promotion is done through inefficient presentations and reactive informational strategies, while likely attributing this to the low budget set for Moldova's promotion as an investment destination. The survey also revealed that investors consider the quality of data existing about Moldova as good, that is, covering most aspects, but not being comprehensive. Additionally, many investors were unaware of incentives that were available, and such information-sharing on incentives is within the purview of an IPA.

- A strategy to achieve objectives, including: (1) the identification of priority sectors/subsectors, and (2) articulation of the business case for priority sectors
- Organizational structures that are aligned to the strategy
- The Implementation plan (short-, medium-, and long-term)
- Monitoring and evaluation (M&E) system to be deployed
- Investor tracking system to be deployed

The agency, organized with such a corporate plan, should then be able to provide key investor services that are commonly the focus of an IPA. These include: (i) providing marketing services that attract, retain, and allow for the expansion of investors, along with supporting opportunities for linkages and spillovers within the key service areas; (ii) providing information and assistance services on all areas of foreign investment – from attracting investment to entering the market and expanding and linking with domestic firms; and (iii) representing the interests of investors to solve problems typically emanating from other parts of government

### **Evaluating and Adjusting Investment Incentives<sup>72</sup>**

In Moldova, businesses, particularly those in FEZs, benefit from several incentives. While an overall estimate of these incentives is not available, corporate income tax expenditures constituted about 2 percent of total foregone revenue estimated by the Moldovan authorities for 2015.<sup>73</sup> Despite these large costs, their effectiveness in attracting investment and creating other benefits remains unclear. To its credit, the government is now developing a methodology to assess incentives by sector and subsector.<sup>74</sup>

According to a foreign investor survey conducted by Magenta Consulting in 2013, existing incentives had only a marginal influence on investment decisions. Follow-on investor focus groups with investors inside and outside FEZs reached a similar conclusion. Investment incentives have not been a major factor in their decision to locate in the zones, as opposed to favorable customs procedures and legal protection.

While an overall analysis of tax incentives is discussed in Chapter 4, the following dimensions focus on those directly related to foreign investments (see also Annex 3 for a list of incentives applicable also to foreign investors).

#### ***Improving targeting of incentives***

Moldova's incentives regime currently relies heavily on tax holidays, VAT exemptions, and import duty exemptions. Tax holidays, in particular, are demonstrated in the literature to benefit more "footloose" investors within a short time horizon or investors that would have been profitable without the incentives. There are fewer benefits to longer-term, and potentially more innovative, investors who may face several years without profit in the start-up phase or during other period of operations (see also Chapter 4). As such, the current incentive regime needs a thorough review and alignment with the emerging objectives.

Most incentives appear unaligned with any particular strategy, much less for attracting FDI. For example, even though FEZs offer the most beneficial economy-wide fiscal terms, based on available figures they do not appear to account for a significant portion of tax revenue foregone. FEZs are featured among the CIT expenditures, which constituted 2 percent of the total public expenditure, with FEZ exemptions accounting

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<sup>72</sup> This section draws on World Bank (2017) and on background analysis undertaken under Moldova Investment Climate Reform Project (World Bank FCI GP).

<sup>73</sup> World Bank (2017).

<sup>74</sup> The WBG team is providing technical assistance under the Investment Climate Reform Project (FCI GP) to the MoF on the development of a cost-benefit assessment methodology for its FEZ CIT incentives.

for 17 percent of all CIT expenditures (Table 1). It cannot be ignored that many of the benefits from tax incentives are captured by state-owned companies.

**Table 1: Top VAT and CIT Expenditures (2015)**

Top 5 VAT Expenditure Items		Top 5 CIT expenditure items	
<b>Motor vehicles</b>	13%	Health care exemptions	42%
<b>Electricity</b>	11%	Deduction for charity	31%
<b>Housing and Land</b>	6%	Exemption for FEZ	17%
<b>Duty-free shops</b>	5%	Employment-related deductions	3%
<b>Agricultural equipment</b>	5%	Exemption for charity entities	3%

Source: World Bank Group (2017).

### ***Improving transparency and administrative probity***

Moldova's incentives could be made more transparent and efficient in terms of procedures related to the application and award of incentives. There is no agency in Moldova in charge of maintaining an up-to-date inventory detailing the investment incentives available to firms through various mechanisms. A laudable initiative was MIEPO's online presence, with general incentive information in English, Russian, and Romanian. Unifying all incentives under the umbrella of the Fiscal Code was also a step in the right direction (see also Chapter 4).<sup>75</sup> However, the government lacks a credible system of compiling information on the characteristics of the incentives available in the country process. Such a system could result in a process allowing regular reporting, monitoring, and regulating of these incentives. The inventory of incentives would improve transparency with regard to investors, but as currently designed, it does not help to promote internal disclosure of information across government agencies.

Despite the progress that has been made, there is still scope for administrative discretion in the awarding of incentives. For example, to benefit from the incentive of deferral of the VAT payment, an enterprise needs to obtain an expert opinion from the Chamber of Commerce on production capacity, the amount of raw material necessary, and the length of the technological cycle to justify the deferral. Requirements like these introduce administrative discretion for a relatively modest incentive. Another example is registration in industrial parks with subsidized land costs. Potential residents might be required to submit an investment project, which is evaluated using 12 explicit criteria, and potentially any other criteria thought to be relevant by the Park administration. There is no scoring system to evaluate correspondence on the project relating to these criteria.

The procedures for the award of some incentives remain either unclear or complicated. For example, procedures to benefit from FEZ incentives could not be found online, neither on the MIEPO website's incentives section, nor on the website of the largest FEZ, Expo-Business Chisinau. The two main pieces of legislation on FEZs also do not clarify how threshold investment amounts are calculated. The CIT reduction to banks and credit institutions, for example, requires a highly detailed inventory of qualifying loans, which creates compliance and monitoring costs for both sides. CIT allowances related to staff transportation and catering expenses are also difficult to administer and require extensive bookkeeping. The 180-day VAT payment deferral incentive also requires compliance with burdensome registration requirements with the MoE and interaction with the Chamber of Commerce.

<sup>75</sup> The Code incorporated CIT incentives for the financial institutions, for example, originally found in the 1995 banking law. The FEZ benefits (Art. 49), as well as credit institutions (Art 24/14 of the Law on Implementing Sections I and II) are also unified under the Code.

### ***Better monitoring of tax incentives could improve results***

Incentive programs are not systematically monitored for cost-efficiency and effectiveness in the attainment of policy goals. It appears that no legislation exists mandating such review. The Moldovan FEZ law and the law introducing Expo-Business Chisinau, for example, do not have requirements to review the costs and benefits of the incentives offered. The FEZ law contains requirements for preestablishment economic analysis, but not post-establishment follow-up. The Law on IT parks contains a chapter on evaluation and oversight of the park (Chapter VI, Article 17), but no follow-up guidelines by the Information and Communication Ministry to implement its provisions could be located through a preliminary online review. The Fiscal Code provision granting banks and credit institutions CIT reduction conditional on credits longer than three years (Law 1164/1997, Article 24/13-14) also does not contain provisions on efficiency review. Neither does the follow-up Government Decree 1390/2003.

Another area needing attention relates to Moldova's FEZ CIT reductions because they appear to apply only to income from exports, meaning that they appear to be export-conditional. The World Trade Organization (WTO), of which Moldova has been a member since 2001, prohibits export subsidies, which violate the Agreement on Subsidies and Countervailing Measures (SCM, Art. 3). It is recommended therefore to flag these subsidies for a legal review to ensure compliance with the World Trade Organization (WTO) regulations.

The following recommendations for action can be made for Moldova's investment incentives:

- Introduce clear, specific, measurable, actionable, realistic, and time-bound (SMART) policy objectives for each incentives program and conduct a cost-effectiveness assessment of incentives. In the context of FDI attraction, such analysis could inform the design of incentives targeting specific sectors and subsectors and facilitating specific segments of efficiency-seeking FDI and FDI linkages in line with Moldova's updated investment attraction strategy.
- Introduce legislation mandating regular review of all incentive programs. The review should determine their relevance and economic benefits relative to budgetary and other costs, including long-term impacts on resource allocation. Legislative requirement of review helps ensure that the reporting of tax expenditures is not done on an ad hoc basis or is subject to political will or pressure.
- Target incentives based on investment or other performance measures rather than profits. This means replacing tax holidays with merit-based incentives such as investment allowances, tax credits, and/or accelerated depreciation (see also Chapter 4). Tax incentives should, to the largest extent possible, be linked to investments made for capital, staff training to develop specific skills and R&D, and tax holidays should be eliminated or used as sparingly as possible. International experiences show that investment-linked tax incentives, such as investment allowances, investment/staff training/R&D tax credits, and accelerated depreciation of prioritized types of capital (for example, technology) tend to be more cost-effective than tax holidays. The former are tied to the level of capital, and hence, create more deliberate motivations for growth. Adjusting the instruments is particularly relevant in relation to Moldova's policy objectives on technological upgrading, expansion of FDI flows, and promoting linkage of foreign investors to local firms, because investment-linked incentives reward the type of behavior that the government is seeking to promote.
- Related to the previous point, emphasize targeting of incentives toward activities or behaviors. It is common for policy makers to make incentives available to all activities within a sector – for example incentives for all tourism firms. However, it is likely to be more beneficial to target a specific activity within sectors that are most responsive and where a market failure exists – for example, encouraging foreign language learning in the tourism sector. Behavioral incentives such

as training grants, scholarship programs, and cooperation with local universities could help in addressing an important concern of many investors in Moldova, which is low availability of skilled labor.

- Increase transparency and accessibility of information on the requirements and procedures of investment incentives by developing, maintaining, and publishing a detailed and user-friendly inventory. Investors should be able to easily access information on the types of incentives offered, requirements for qualification and documentation, maximum amounts available, the procedure and decision criteria for the award, the length of the procedure, the authority in charge, administrative costs, contacts, and so forth. Relevant public institutions should regularly and systematically collect and exchange information on incentives, and the data should ideally be consolidated in a centralized database with the public interface of the designated agency. Several countries have undertaken steps to increase transparency of incentives, including Armenia, Tajikistan, Kazakhstan, and Kyrgyzstan. Another good example is Jordan where the government, with support from the World Bank Group, developed a centralized online portal detailing the country's incentives scheme, including searchable criteria and links to relevant laws and administrative documents.<sup>76</sup>
- Simplify incentive application procedures with automatic approval of tax incentives and with subsequent risk-based audits. Country experiences show that automatic approval of tax incentives (that is, investors who meet the eligibility criteria for an incentive are automatically granted) helps minimize discretionary decision-making and encourages investor certainty, so long as the eligibility criteria are objective and clear. Tax authorities should verify and carry out audits, as needed, to minimize misuse. Morocco, for example, publishes a detailed account of tax expenditures as part of its annual budget. Expenditures are presented by tax instrument, by type of beneficiary, and by industrial sector. The detailed report also contains information on the types of incentives granted, their legal basis, the intended objectives, and the eligible beneficiaries.<sup>77</sup>
- Review export-contingent incentives in the FEZ in line with the World Trade Organization commitments. While duty drawbacks on imports, and also inputs into the production of products that are consequently exported, appear to be in line with the WTO rules, the CIT deductions and export-contingent capital import exemptions should be flagged for a legal review to ensure compliance with the WTO Agreement on SCM.

### **Reducing barriers to foreign entry**

Moldova has undertaken a number of reforms to make investment entry easier. One particular area of progress is the liberalization of foreign labor regime. The 2017 amendments<sup>78</sup> to the Law no. 180/2008 on Labour Migration, as well as to the Law no. 200/2010 on the Regime of Foreigners in the Republic of Moldova improved the procedure of granting and extending the right to work and the temporary right of residency of foreigners employed in the Republic of Moldova, and thereby considerably improved the situation for investors in need of foreign labor and expertise. This is a welcome step given that World Bank focus groups with investors conducted in 2016 found that the process to obtain a residence permit and visas was the second most difficult activity, after access to land. The reform has reduced the total duration and cost of securing foreign labor, and eliminated a number of onerous procedures applying to several categories of foreigners. Moreover, the government has liberalized market access for foreign IT

<sup>76</sup> See <https://jic.gov.jo/portal/Home/Inventory>.

<sup>77</sup> See [http://www.finances.gov.ma/Docs/2014/DB/dep\\_fisc\\_fr.pdf](http://www.finances.gov.ma/Docs/2014/DB/dep_fisc_fr.pdf).

<sup>78</sup> Law #165 of 20.07.2017 „amending and supplementing certain acts”, Published in the Official Monitor No 356-359 of 06.10.2017; Law #221 of 23.07.2017 „amending and supplementing certain acts”, published in the Official Monitor No 244-251 of 14.07.2017; Law #23 of 10.03.2017 “amending and supplementing certain acts”, published in the Official Monitor No 119-126 of 14.04.2017.

professionals in its Law no. 121/2017, exempting foreigners with senior management positions and specialists in the IT sector from the obligation to obtain a residence permit, and entitling them to obtain a long-stay visa. In 2019, the government also created a list of 126 occupations that will benefit from an improved visa and work/residence permits regime, including several high-skilled occupations that were not previously available in the country. This will allow Moldova to better attract investment higher up the value chain and for more sophisticated tasks because these kinds of firms require more specialized talent.

Beyond work and residence permits, further entry reforms should focus on streamlining requirements to set up investment, and on improving access to land and production sites and facilities. These improvements should be accompanied by broader efforts to promote digitalization of government and business relations in order to cut red tape and transaction costs for investors.<sup>79</sup>

### ***Requirements to set up investment***

The Investment Law is one of the strongest features of Moldova's investment policy and promotion framework. The foreign investor survey of 2013 confirms this view by rating the legal framework for opening and managing a business and the procedures for business registration positively.<sup>80</sup> Additional focus groups with foreign investors also suggest that investors generally did not experience any market access restrictions or forms of discrimination when setting up business in Moldova. The one-stop-window established by State Chamber of Registration (SCR) also appears to function well within its parameters. Representatives from the SCR mentioned that connection issues with the coordination institutions were resolved and the cooperation is now good. Investors confirmed this view in interviews. A next step for the SCR would be permitting online submission of a registration application, which would make a personal appearance at the SCR unnecessary.

According to the Investment Law,<sup>81</sup> foreign investors can enter the market without prior clearance or screening and they are required to obtain the same registrations and licenses as domestic investors. Foreigners are generally allowed 100% ownership of businesses in Moldova and there are no minimum investment requirements. The only one exception from the generally open rule concerns the gambling sector, where foreigners are limited to a maximum of 49 percent ownership in a company operating under the Law on Gambling.<sup>82</sup> An additional report identified restrictions to foreign entry in the financial sector.<sup>83</sup> Most of the sectors covered by the World Bank Investing across Sectors<sup>84</sup> indicators are fully open to foreign equity ownership in Moldova.

As a notable exception, the forestry sector is dominated by a state-owned monopoly and is closed to foreign equity participation. While there do not appear to be limitations for market access to FDI, multiple reports confirm that monopolistic market structures in certain other strategic sectors such as electric power transmission, fixed-line telecommunications infrastructure and services, water distribution, freight

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<sup>79</sup> Concrete efforts are being discussed within the Prime Minister's Economic Council of Moldova at the time of report writing.

<sup>80</sup> Magenta Consulting Survey (2013).

<sup>81</sup> Law on Investment in Entrepreneurial Activity No 81-XV dated 18.3.2004.

<sup>82</sup> Art. 10 Law on Gambling No. 285 of 18.02.1999.

<sup>83</sup> Foreign branches of banks and insurance companies are not allowed, and there are also restrictions regarding the legal form of establishment (only joint stock companies are allowed). Precautionary measures also apply in form of ex-ante approval of mergers and acquisitions. Source: Expert Group – independent Think-tank (2017).

<sup>84</sup> World Bank (2012).

rail transport and port operation, and postal and couriers services present further obstacles to potential foreign investors.<sup>85</sup>

### ***Restrictions for foreign investors to own land and buildings***

Foreign investors can own and lease land and buildings in Moldova except for agricultural and forestry land. The prohibition of foreigners from owning agricultural and forestry land is stipulated in the land legislation.<sup>86</sup> These types of land can only be leased by foreigners for up to 99 years.

Investors find land acquisition and land use as problematic, in particular if they depend on specific plots of land. If a foreign investor wants to buy agricultural land for industrial purposes, then the purpose of land use has to be changed, a process that foreign investors consider very difficult.<sup>87</sup> This includes investment in agriculture, but also applies to major investors in the services sectors. For example, mobile phone operators found the prohibition to buy land for their transmission towers very burdensome because the needed spots were often on agricultural land. Even if land use can be changed and land acquired, it is still very difficult to obtain the necessary construction permits from the respective municipality to build the infrastructure. Moldova ranked 165th out of 190 countries included in the 2018 World Bank Doing Business Report. The source of the issue may have a legal element, such as if the requirements are excessive and set by law, or an institutional element, such as that the municipalities do not have sufficient capacity to conduct timely inspections and assessments. The government may wish to start with a process map to identify which legal provisions, institutions, and/or process is responsible for the significant delays.

### ***Strengthening investor protections***

Improvements to the legal framework (“de jure”) and in particular to key investor protection guarantees -- protection against expropriation and breach of contract, ability to convert and transfer currency overseas, lack of transparency, arbitrary government action, and discrimination -- can greatly improve investor confidence. Yet the biggest challenge faced by investors is the lack of implementation of laws (“de facto”), regulations, and contracts.<sup>88</sup> Moldova’s de jure legal framework with regards to investor protection is by and large sufficient, and is well elaborated in bilateral investment treaties and national legislation.<sup>89</sup>

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<sup>85</sup> See chapter on Markets and Competition Policy for a further discussion of competition policy barriers in these and other sectors.

<sup>86</sup> Art. 22 Investment Law, and art. 4(3) Law Nr. 1308 of 25.07.1997 on normative price and mean of sale and purchase of land.

<sup>87</sup> Magenta Consulting Survey (2013).

<sup>88</sup> The 2017 Global Investment Competitiveness Survey conducted by the World Bank Group found that about half of all investors experienced lack of transparency and predictability in dealing with developing country public agencies. Almost half encountered adverse regulatory changes and delays in obtaining necessary government permits and approvals to start or operate a business. Over 40 percent encountered restrictions in transferring and converting currency. In these cases, about one in four investors canceled a planned investment or withdrew an existing investment owing to political risks. The term “political risk” is wide-ranging and generally includes expropriation, unpredictable and arbitrary government actions, discrimination, and the absence of regulatory transparency, among others.

<sup>89</sup> Moldova has signed 41 bilateral investment treaties (BIT) of which 39 are in force and which include core investor protection guarantees concerning investment protection. These are also reflected in Moldova’s domestic legal framework. Art 6. of the Investment Law prohibits discrimination between domestic and foreign investors (nondiscrimination clause) and between foreign investors from different nations (most-favored nation clause). Similarly, the Investment Law (Art. 10 and 11) and the Expropriation Law 89 provide the details on property protection. Investments can only be expropriated based on the law for general public use without discriminatory effect and against compensation. Art. 46 (2) and Art. 128 (1) of the Constitution of Moldova states the fundamental principles of property protection applicable to all residents including foreign investors. The Art. 21 Investment Law guarantees the right to transfer funds including profits obtained on account of the foreign investment abroad. Moldova’s legislation on dispute settlement includes the Civil Procedure Code, the Investment Law, the Law on Arbitration of 2008, the Law on International Commercial Arbitration of 2008, and the Law on Mediation of 2015. These investor protection

However, implementation at times remains problematic. There is a perceived discrepancy between the legislation in force and its implementation.<sup>90</sup> For example, foreign investors in Moldova report that effectiveness of the expropriation laws look good only on paper.<sup>91</sup> In practice, the administrative processes involved in expropriation cases are poorly managed. This gap between the legislation and its implementation creates negative impact on investment decisions by all investors. Prior WBG focus group surveys in Moldova attribute implementation problems to deficiencies in administrative capacity, the lack of clear institutional mandates, and outdated laws and regulations.<sup>92</sup>

Weak regulatory governance and lack of faith in the judiciary has left investors with no effective alternatives to resolve investment grievances. The national court system in Moldova does not appear to be well regarded by investors. The judicial system is weak, and the quality of the courts is limited (see also Box 5 for a summary of the challenges faced by Moldova's justice system).<sup>93</sup> In 2015, the government established the Council for Investment Projects with National Importance under the prime minister. However, this is available only for large investors and high-level cases. To date, there is no formal mechanism for general investor complaints that can solve grievances in an administrative process before going to court. As part of the recent inspections reform, the government has created Dispute Resolution Councils in each inspection body to review firm complaints against actions of inspectors. These councils include representatives of business associations and act as pre-court mechanisms. Beyond inspections, there does not appear to be a practical solution to resolve investment grievances. Investors are often required to contact multiple ministries and relevant authorities to resolve their grievances resulting in the increase of operational costs. These continuing grievances posed a risk to their investment which was estimated to be a minimum of US\$70.4 million. While investors desire to continue their business activities in Moldova, many expressed the concern that they will be simply forced to leave if solutions to their grievances are not found. A few firms also cited their intent to postpone or cancel existing plans because of continuing grievances.

Lack of an effective mechanism for addressing investor problems relating to investor protection makes Moldova vulnerable to investor state dispute settlement (ISDS) claims. In recent years, Moldova has seen a surge in the number of investment arbitrations filed against it. Since 2010, 7 ISDS cases has been initiated against Moldova (1 pending case and 1 discontinued). Of these, 3 were decided in favor of Moldova and 2 in favor of investors. A deeper analysis of these cases reveals that on multiple occasions, the government conduct had resulted in violation of core investor protection guarantees such as fair and equitable treatment, lack of transparency, unpredictability, arbitrary or inconsistent government action, and discrimination. This is synonymous with the findings from the 2014 World Bank Group investor survey of seven large investors in Moldova. A total of 30 grievances were identified by the companies, with some grievances relating to more than one area of investor protection guarantees. Most grievances are in relation to issues pertaining to the customs authorities and to tax authorities, in particular, the interpretation of fiscal codes and customs regulations and their application to investments. The presence of disputes, notably the duty-free concessions case<sup>94</sup> that has been dealt with through arbitration at the International Center for Settlement of Investment Disputes (ICSID),<sup>95</sup> and other cases that have been dealt

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principles enshrined in the domestic legal framework and international investment agreements (IIAs) of Moldova reflect good international practice.

<sup>90</sup> Magenta Consulting (2013).

<sup>91</sup> Investor Focus Groups, World Bank Group (2016).

<sup>92</sup> World Bank Group (2016): Assessment of the Legal and Administrative Framework for Foreign Investment in Moldova, Analytical input for Investment Policy Statement of Moldova.

<sup>93</sup> UNCTAD (2013).

<sup>94</sup> Mr. Franck Charles Arif v. Republic of Moldova (ICSID Case No. ARB/11/23).

<sup>95</sup> ICSID. <https://icsid.worldbank.org/en>.

with through the European Court of Human Rights (with unspecified damages to be paid by Moldova), or are still being addressed by this Court, suggest that grievance escalation is an important issue for Moldova.

A mechanism ensuring regulatory compliance across Moldova's key government agencies and promoting effective problem-solving for investors would help prevent investor grievances from escalating into disputes by identifying them in a timely manner and attempting to resolve them early in the process. This would result in a more transparent and consistent investment climate and would help address foreign investors' main concerns about political risks. In practice, Moldova's investor protection framework could be strengthened through a multi-phased approach:

The first is to develop investor aftercare services at the new investment agency, which should include various information, assistance, and policy advocacy services. Investor aftercare is a core investment promotion function offered by good practice investment promotion agencies around the world. Aftercare is a tool for the government to convert investment decisions by businesses into establishing, retaining, expanding, and thereby increasing the benefits of investment. The role of aftercare is equivalent to that of "after-sales services", aimed at enhancing customer satisfaction and encouraging "repeat purchases". Aftercare services may help to realize the potential benefits from inward FDI in Moldova, such as technology transfer, local supply chain development, and further job creation. In addition, existing investors can also be good promoters of Moldova as a host location. A fundamental step toward such a policy could include the following, among others: taking stock of all available channels through which investors can have their issues resolved or addressed, as well as of their effectiveness; clarifying the legal regulatory framework for aftercare; developing an aftercare strategy based on the agency's capacity and the needs of investors; designing aftercare tools and procedures; developing an implementation work plan; supporting implementation of strategy; and training aftercare staff.

A second approach is to systematically track investors' grievances and identify their source, cost, and impact on lost investment. This will allow priority focus on a mechanism that could help address such grievances at later stages. A key step towards systematically tracking investor grievances is to create a tool to produce a database of existing investors that enables the new investment agency to monitor investors' issues/grievances and needs. This tool will not only store names, addresses, and contact numbers, but it is designed to track a number of activities, including interactions, grievances and their impact on investment; the evolution of investors' issues; government (involving key players) and investor action plans on projects; and the general progress of the relationship. The crucial element to the success of the database lies in the quality of the staff of the investment agency that will manage it – the same staff that will be leading the relationships with the investors regarding potential grievances, issues, post-establishment needs, and so forth.

A third approach is to develop a mechanism to address grievances which arise due to government conduct that is inconsistent with Moldova's domestic laws and its IIAs, and which, in some cases, could potentially elevate to investor-state disputes. The implementation of a successful investor grievance mechanism entails the empowerment of a reform-oriented agency of the government, the task of which is to influence other agencies' actions to effectively reduce political risk at its source. This lead government agency, which would need to be identified, would bring to the attention of higher levels of government problems affecting investments in order to be addressed before the problems escalate further. Operationally, the Systematic Investor Response Mechanism (SIRM) focuses on the following aspects: (i) to identify specific patterns and origins of government conduct generating political risks; (ii) to measure affected investment as "evidence" to advocate for timely changes and resolutions of issues; and (iii) to strengthen capacity in relevant institutions to minimize the recurrence of these events.

## Promoting FDI linkages

Investor interviews undertaken in Moldova<sup>96</sup> suggest that linkages between foreign and local firms are very limited. Where linkages do occur, they appear to involve sourcing of low-value added or nontradeable inputs. On average, interviewed companies import 90 percent of production inputs and locally source only basic goods and services, such as packaging, cleaning, transportation, and construction services, as well as office supplies and basic equipment and spare parts. Companies import both raw as well as processed production inputs, such as processed leather, fabric, or plastic profiles for the production of cover seats, plastic granules, and wool for the production of plastic and woolen yarn (for carpets), metal sheets for production of metal structures, fabric for printed circuit boards for electronics, as well as all kinds of production equipment and spare parts.

Evidence from countries that successfully forged FDI linkages suggest that GVCs offer opportunities for backward linkages and technology transfer, but these are not guaranteed, and require policy support. The scope and scale of vertical linkages being created and technology transfer can vary significantly between countries due to a complex set of “mediating factors” at play. Demand-side factors, in particular FDI characteristics, and supply-side factors, in particular the host country policy environment, and the absorptive capacity of local firms, are all key factors that need to be understood to realistically assess the scope of the opportunity as well as to determine which policies to prioritize. Moreover, access to high quality services (for instance, telecommunications, logistics, professional services, engineering, software development, and so forth) are considered key to building 21st century manufacturing eco-systems. There is evidence that they help raise productivity of foreign and local manufacturing firms alike, which is another reason for Moldova to address pending barriers to competition in a range of backbone services, as was discussed earlier.

One demand-side constraint for investors to source more locally is that local sourcing decisions are prescribed to them outside of Moldova by their customers or company HQs. Investment in automotive represents 2<sup>nd</sup> and 3<sup>rd</sup> tier suppliers, who have limited flexibility in non-ore input sourcing. However, interestingly, the Balti FEZ is currently in the process of identifying plastic producers in Moldova to explore the possibility of replacing imports in the zone. The zone is unique in Moldova because it is advocating for direct sourcing decisions in favor of Moldova, an approach that could be tested and explored by other companies and sectors given that Moldova’s key FDI sectors at present are in GVCs with similar requirements.

While most of the companies do not consider local sourcing a corporate priority, they are generally interested in sourcing more inputs locally. Most companies are interested in sourcing various services locally, such as medical, international transport, or engineering services. In terms of goods, one company mentioned spare parts, paints and brushes, and carton paper as examples of goods that they would be willing to source locally and where they also have flexibility about sourcing decisions. A comprehensive review of goods and services with the highest demand would help in determining the top areas of opportunity.

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In 96 Interviews with 11 major companies in Moldova, 6 of which were located in the three most successful FEZ in Moldova (Balti, Ungheni and Expo Chisinau) and 5 outside the FEZ, light was shed on the intricacies of local sourcing. The sample consisted of companies in manufacturing companies related to automotive sector, such as in textiles and electronics (7) and various types of services (4). The companies export the vast majority of their production to EU countries, mostly to Germany and Romania, but partially also to Switzerland and the United States. These include in manufacturing: plastics for textiles for automotive, plastics for automotive and other sectors, metal processing and seat covers for automotive, power electronic equipment for automotive, electronics, and food and beverages. These include in services: logistics services, ITC services, construction services/equipment rental, and retail services.

The main supply-side constraint is the lack of both, quantity and quality of local supply. Six out of eleven companies found that the most important challenge is the absence of Moldovan firms that would be able to provide the required production inputs. Regardless of whether they are located in an FEZ or not, local supply of production materials and equipment for sophisticated manufacturing of goods seems to be currently unavailable in Moldova, which is a reason that both local companies and MNCs in the manufacturing sector continue to rely heavily on imports for inputs. This finding is consistent with the Investment Competitiveness Benchmarking (ICB) analysis as well as the 2017-2018 Global Competitiveness Report, according to which Moldova performs poorly both under local supply quantity (121/137) as well as quality (100/137), but also other indicators measuring the levels of its overall absorptive capacity.

In some cases, production is present in Moldova but does not meet the quality standards required by EU customers. This concerns all manufacturing sectors, in particular automotive and electronics, but also construction services. Accordingly, two challenges concern the lack of quality control standards and informality. There are also other challenges, such as general lack of management capabilities and a lack of basic certifications. One specific regulatory barrier that was mentioned was the need to obtain a special customs declaration for sourcing on local inputs valued at more than 500 EUR (according to Law 440 on FEZ). The process can take several hours, unnecessarily delaying production processes. This problem already somewhat complicates local sourcing, but it could be a bigger issue going forward provided that linkages would grow.

There are also information asymmetries between FDI and local companies. There is no information on available suppliers, or what they offer in terms of product quality and production capacity. In fact, some companies argue that they purchase from suppliers in Romania due to proximity as well as due to already-established supply patterns without looking into potential local options. This leads to Moldovan companies being pushed to promote themselves “door to door”. In one case, a local construction company learned in the news of a large investor’s dissatisfaction with its current supplier and decided to approach them directly, which led to their successfully replacing the previous supplier.

MIEPO took initial steps towards creating a supplier database which includes 55 local companies. However, the database covers a range of sectors and therefore lacks the depth required for a particular sector. Unlike in other countries, the database is not accompanied by an opportunity through which buyers can share their procurement plans or requests for proposals. The supplier database and portal are usually part of a wider, supplier development program which can involve other agencies such as ODIMM and the FEZs in developing the local supply chains in terms of productivity by offering them support and training or addressing regulatory bottlenecks.

The government does not appear to prioritize FDI linkages as a policy objective. Overall, FEZs are concerned with performance on three indicators which they regularly report on to the MoE, that is, investment, jobs, and sales/output. There is no linkage indicator. The topic is therefore new. Only one zone, in Balti, has started to actively take steps to develop a supplier development program following the Czech SDP experience, and in collaboration with APIP (Association of Producers in Manufacturing), and also the ministry. Government funding is not yet allocated, but the initiative itself could be a first step for Moldova and a test ground for further programs. Other zones, and government agencies more broadly, do not appear to be active in this area. According to international experience, it takes about 3-5 years for

FDI linkages to emerge, which is another important reason to be taking policy actions that enable their creation.<sup>97</sup>

In sum, it appears that limited capacity on the part of the local private sector, exacerbated by coordination failures and some demand-side constraints, explain the limited involvement of Moldovan firms in the supply chains of MNCs, including those that currently use Moldova as an export platform.

According to investors, critical forms of support to help improving linkages with local companies include providing financial benefits to foreign investors to train local suppliers and to local suppliers to upgrade their capacity, as well as attracting new foreign-owned supplies to Moldova which could fill in gaps in local supply chain. It is also important to organize targeted B2B matchmaking events (meet the buyer, speed dating, and so forth), to introduce supplier capacity development programs, and to provide financial benefits to foreign investors to encourage local sourcing. As indicated above, the government is currently not providing these services.

It is in Moldova's interest to put in place an FDI linkages policy to help increase localization, especially in priority manufacturing sectors such as automotive, electronics, and high-tech which will require supporting industries that can produce at internationally competitive quality and cost standards. At the same time, it is important to highlight that attraction of competitive foreign suppliers to increase domestic value addition and local eco-system development should also be part of such a strategy, as opposed to solely focusing on backward linkages with local firms. Competitive suppliers are in fact needed in Moldova to make it more attractive for further FDI and to gradually build domestic capacity.

Many agencies around the world have been involved in linking FDI to local firms to various degrees. Czech Republic and Costa Rica are two examples:

- In the Czech Republic, CzechInvest (investment promotion agency) under the Ministry of Industry and Trade implemented a supplier development program that consisted of advanced payment and financing provided by MNCs to suppliers, the development of a supplier database and match-making services, specialized trainings for potential suppliers to address skills gaps, and consulting services (by local and international consultants) implemented through matching grants awarded to high-potential suppliers (95 percent CzechInvest contribution, 5 percent firm contribution). CzechInvest played an important role in coordinating various stakeholders (MNCs, SMEs, and universities) and in providing match-making services between buyers and suppliers. Evaluation of the pilot program found that US\$46 million worth of new contracts (2000-03) were created with 15 suppliers.
- In Costa Rica, PROCOMER implemented a similar program called Provee that involved changes to EPZ (export processing zone) laws for the increase of linkage activities, reduction of business registration procedures, development of supply and demand data, in-house training and consultancy services, private-sector partnerships with universities in curriculum upgrading (for example, Intel) and match-making services between buyers and suppliers. An impact evaluation by Monge-González and Rodríguez-Álvarez (2013) found that participating firms had higher real average wages paid to employees, increased employment, and a higher probability of exporting.

To date, the government has not yet taken up this role in a targeted and systematic way. In particular, the new investment promotion agency and the FEZ authorities could play a more proactive role on linkage promotion alongside central government agencies.

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97 S. Kalemli-Ozcan et al. (2016).

The following recommendations are proposed with respect to boosting FDI linkages in Moldova:

- Choose a pilot sector and develop an FDI Linkages Action Plan with a secured budget for implementation. As a first step, conduct a *demand-supply gap analysis* to highlight the current potential, gaps, and challenges for promoting FDI linkages in the sector, and design and implement a targeted supplier development program in a pilot sector to increase local sourcing.
- Provide targeted matchmaking services to reduce the overall search and find costs for foreign firms. A designated central government agency, such as the new investment agency in collaboration with an FEZ authority and the Organization for Small and Medium Enterprises (ODIMM) should work closely with the MoE in developing a high-quality comprehensive database of potential suppliers in Moldova (including both foreign and locally owned companies). The agency will need to upgrade its partner network and knowledge of the local private sector to better integrate these activities as a key part of its investor-servicing function. International experience shows that the earlier the introduction, the greater the chance of foreign firms using the local firm introduced. Agree on an implementation mechanism for MoE, FEZ, the investment agency and ODIMM, because this effort will require a strong partnership among the agencies.
- Identify gaps in the local supply chain of investors in priority sectors and launch a targeted investment promotion campaign to attract capable international suppliers. Focus should be on areas where Moldovan companies and suppliers do not exist or where the technology gap is too large to be bridged in the near future.

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## Chapter 3 – Incentives to Drive Productivity: The Role of Competition

### Introduction

Competition in markets can be a driver of growth and of productivity. Competition can affect both components of aggregate productivity growth, promoting intra-firm productivity growth and/or resource reallocation towards more productive firms and sectors. In workably competitive markets, firms with higher productivity will tend to gain market share and drive lower-productivity firms to exit. In markets exposed to new entry, competition disciplines firms from raising prices to consumers, and compels a continuous search for cost-reducing technologies.

This chapter reviews restrictions to market competition in Moldova that can prevent productivity growth and identifies opportunities for policy changes that could break down barriers to new competition. As will be discussed, the combination of (i) market power (by either SOEs or private players), (ii) anticompetitive regulation (for instance, price controls in competitive sectors or restrictive sector regulation), and (iii) other distortive government interventions (for instance, lack of competitive neutrality, subsidies and benefits that do not comply with state aid rules) inhibits creation of the necessary incentive structure needed to make market players deliver efficient outcomes in Moldova.

The first section presents evidence of weak competition in Moldova and investigates the expected gains for productivity growth associated with greater competition. It reports several indicators of weak competition in product and services markets. The second section investigates potential causes of poor market competition looking at economy-wide policies. Factors which figure prominently include: (i) market concentration in interaction with SOE ownership in sectors commonly left to the private investment with a lack of competitive neutrality; (ii) distortionary tax and other forms of state incentives that do not comply with state aid regulations; (iii) extensive price controls that restrict market dynamics; and (iv) the limited effectiveness of antitrust policy. Finally, the chapter presents a set of policy recommendations. Annex 4 discusses the positive effects of antitrust enforcement on productivity growth.

Without implementing adequate mechanisms to deter abuse of market power, to eliminate anticompetitive regulation, and to level the playing field, Moldovan markets will not be able to deliver efficient outcomes and boost productivity.

### Weak Competition: A Drag on Productivity Growth?

The economic benefits from competition are well documented. Firms operating in a competitive environment are more likely to innovate and to increase their productivity.<sup>98</sup> Competition in input (upstream) markets, such as transportation, financial services, energy, telecommunication, and construction services, is a key driver of efficiency and productivity growth in downstream sectors—the users of these inputs.<sup>99</sup> Competition boosts investment, generates employment, and ultimately speeds up economic growth and improves overall welfare. Increased international competitiveness - and therefore more favorable terms of trade - is another important and positive effect associated with

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<sup>98</sup> See Bassanini and Ernst, *Labour Market Institutions, Product Market Regulation, and Innovation: Cross Country Evidence*, (Economics Department Working Papers No. 316, ECO/WKP 2002); Nicholas Bloom, Mirko Draca, and John Van Reenen, "Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity" (NBER Working Paper No. 16717; 2011); P. Aghion, and R. Griffith, *Competition and Growth: Reconciling Theory and Evidence*, (Cambridge, MA: MIT Press, 2005); see Annex 4 for an overview of the literature about competition and productivity growth.

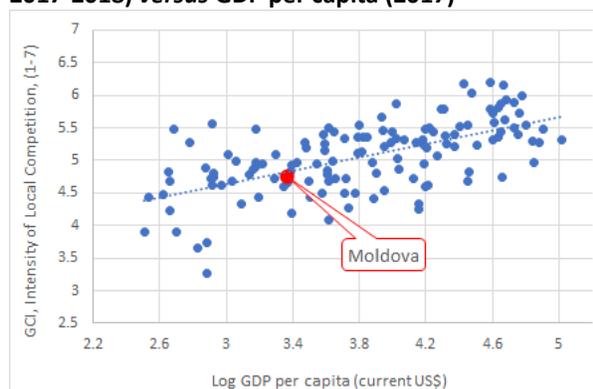
<sup>99</sup> See A. Alesina, G. Ardagna, G. Nicoletti, and F. Schiantarelli, "Regulation and Investment," *Journal of the European Economic Association* 3 (4) (2005): 791–825.

increased competition in domestic markets. Finally, consumers benefit from lower prices, direct savings, and improvements in the variety and quality of goods and services.

### Indicators of market concentration and weak competition

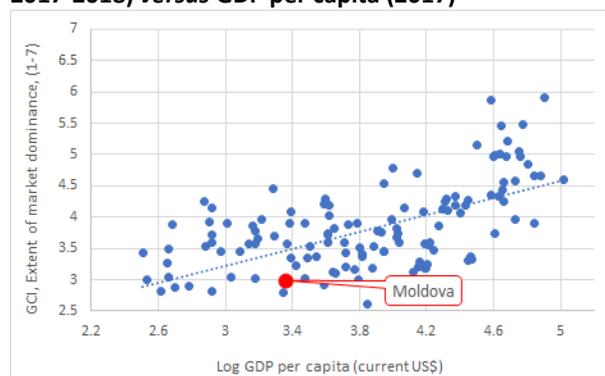
In Moldova, however, several perception-based indicators point to weak competition. First, the Global Competitiveness Index 2017-2018 (GCI), published by the World Economic Forum, ranked Moldova 95<sup>th</sup> in intensity of local competition, 122<sup>nd</sup> in extent of market dominance, and 126<sup>th</sup> in effectiveness of antimonopoly policy among 137 economies. Among the 14 ECA economies, Moldova has ranked last or second to last in all dimensions (Figure 62). As Figure 60 and Figure 61 demonstrate, competition indicators are positively correlated with cross-country data on GDP per capita, but Moldova performs below average for its level of GDP.

**Figure 60. Intensity of local competition (GCI, score 2017-2018) versus GDP per capita (2017)**



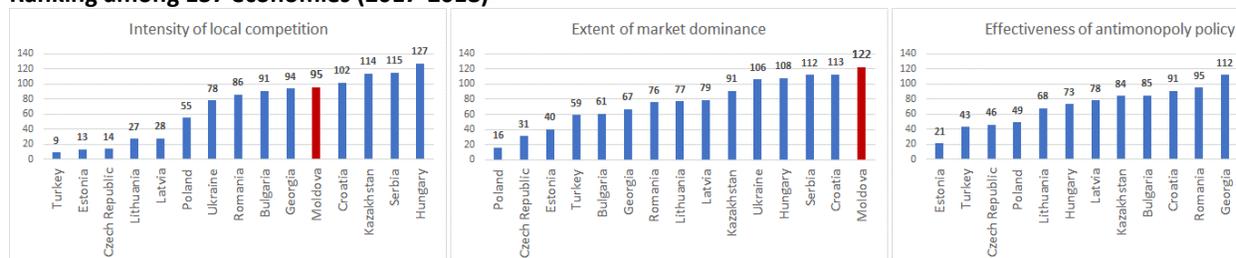
Source: World Bank Staff based on World Economic Forum. Global Competitiveness Report 2017-2018. Scores vary from 1 (worst) to 7 (best). WDI, GDP per capita, current USD 2017.

**Figure 61. Extent of market dominance (GCI, score 2017-2018) versus GDP per capita (2017)**



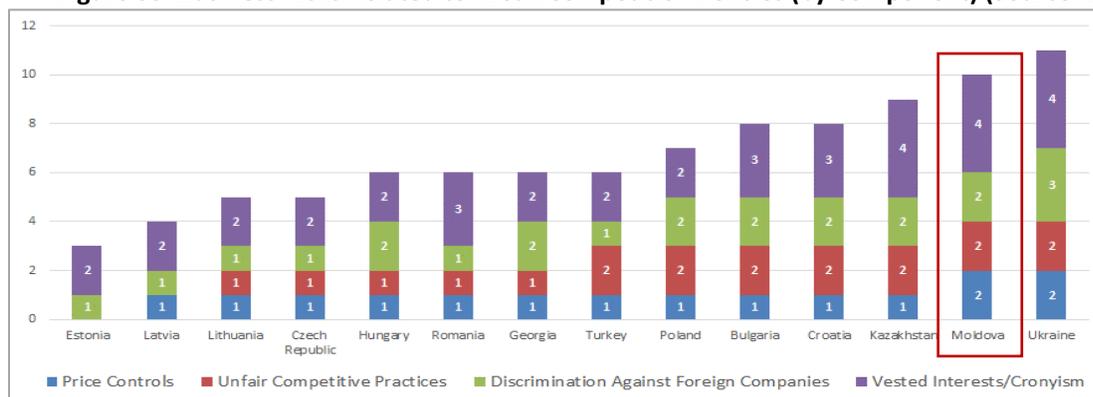
Source: World Bank Staff based on World Economic Forum. Global Competitiveness Report 2017-2018. Scores vary from 1 (worst) to 7 (best). WDI, GDP per capita, current USD 2017.

**Figure 62. Performance of ECA countries in the Global Competitiveness Index. Competition related variables. Ranking among 137 economies (2017-2018)**



Source: World Bank Staff based on World Economic Forum. Global Competitiveness Report 2017-2018. Total sample of 137 economies; 1<sup>st</sup> is the best rank, 137<sup>th</sup> is the worst rank.

Another set of perception-based indicators comes from The Economist Intelligence Unit (EIU). In its survey, firms in Moldova perceive that their ability to compete may be impaired by government rules that impede competition based on merit (Figure 63). Moldova performs at the bottom of its comparator group, particularly on the perception of vested interests that are distorting economic decisions. The perception of unfair competitive practices, discrimination against foreign companies, and price controls also appear at the highest level among comparator economies.

**Figure 63. Business Risks Related to Weak Competition Policies (by Component) (Source: EIU 2018)**

Source: World Bank Staff based on Economist Intelligence Unit (2018). Note: The graph shows an aggregation of four indicators each scored on a scale from 0 (very little risk) to 4 (very high risk)

Other data indicate that Moldovan markets experience high levels of concentration. Data from the 2013 World Bank Enterprise Survey indicates that 59 percent of all manufacturing markets in Moldova are monopolies, duopolies, or oligopolies with fewer than six competitors (Figure 64). In addition to market concentration, several of these sectors are also characterized by the significant presence of SOEs. Moldova has SOEs in at least 19 of the 26 aggregated sectors, including five manufacturing sectors (Figure 65).

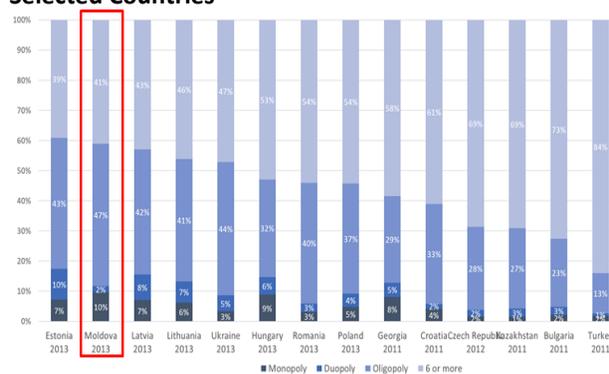
Even though market concentration, *per se*, is not an indicator of market dynamics – particularly for small economies – other associated factors reinforce the perception that Moldova faces significant market constraints.<sup>100</sup> Moldova makes significant use of state aid that is frequently allocated on an individual basis, including to SOEs, which can reduce competitive neutrality, create barriers to entry, and harm market competition.<sup>101</sup> At the same time, some sectors are also characterized by a combination of restrictive regulation, lack of antitrust enforcement, and market concentration in the hands of just a few private groups – such as in media and fuel retail.<sup>102</sup>

<sup>100</sup> It should be noted that static concentration measures are only a first step in understanding the level of competition in a market, as inherent market characteristics may result in relatively more concentrated market structures regardless of the level of competition. For example, in the presence of large economies of scale and small market size, a more concentrated structure may necessarily result – and require openness to trade to be efficient. In general, more weight is given to market concentration when market shares have been stable over time (this happens in some markets in Moldova and not in others). Typically, if a firm has retained market share after its prices have increased over time relative to its rivals, that is more of an indication of a lack of competitive pressure. High concentration with significant changes in market shares overtime should be less worrisome. Descriptions of how features of various markets, behavior of market players, market concentration, and restrictive regulations interact to allow for anticompetitive outcomes are listed below: in railroads (Box 9), airport services (Box 11), fuel retail (Box 14), and sunflower seeds (Box 13)

<sup>101</sup> In 2016 alone, total state aid constituted 4.17 percent of GDP (the EU average state aid as a share of GDP was 0.69 percent), of which almost 90 percent was disbursed through not sufficiently transparent tax benefits, and almost 40 percent was allocated in an individual basis.

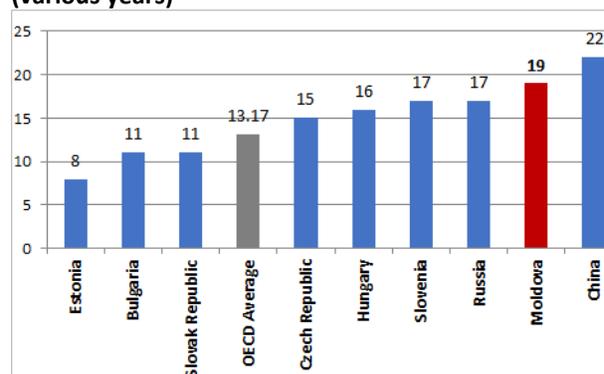
<sup>102</sup> The General Media Group Corp controls 60-70 percent of radio and television, while Petrom Moldova controls 15-20 percent of fuel retail. These sectors also count on SOEs (fuel, in the upstream market).

**Figure 64. Manufacturing sector market structures for Selected Countries**



Source: World Bank Staff based on the Enterprise Survey, WBG.

**Figure 65. Number of sectors with SOEs (PMR), (various years)**



Source: Preliminary results OECD-WBG Product Market Regulation indicators. Note: Years change between 2013, 2016 and 2018 for different countries. Moldova refers to its preliminary data for 2018 product market regulation index (PMR). Elaborated by the Markets and Competition Policy team.

## Increasing competition could raise productivity

The potential productivity dividends stemming from fiercer competition across the Moldovan economy are estimated to be large. Indicators of market power are above-normal profits; these can be proxied by using price-cost margins (see Annex 5). Higher price-cost margins in a given year -- implying that firms face lower levels of competition intensity -- are significantly associated with lower labor productivity growth in the following year (Table 2). Results suggest that increasing competition intensity by 10 percent<sup>103</sup> would be expected to generate additional growth in labor productivity of 5.1 percent per year.

**Table 2. PCM and real (labor) productivity growth**

	Ln(Real_labor productivity)	Ln(Real_labor productivity)
PCM[t-1]	-1.769***	-4.06***
PCM[t-1]^2		2.805***
Firm FE	Yes	Yes
4 digit sector FE	Yes	Yes
Year FE	Yes	Yes
r2	0.261	0.280
N	41902	41902

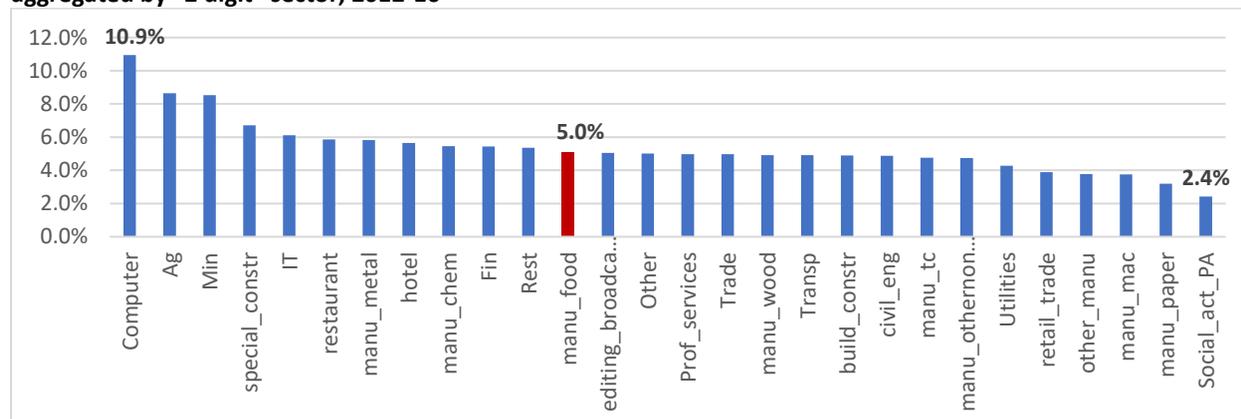
Source: World Bank Staff. Note: Panel data regression results for 2012-2016 period, FE= fixed effects.

The gains from increased competition can be calculated across sectors in both goods and services markets. The magnitude of the (lagged) markup coefficient varies substantially across sectors (Figure 66). Considering those two-digit sectors where the estimated coefficients are statistically significant, the productivity growth dividend of a 10 percent increase in competition intensity varies from 2.4 percent (social activities) to 5 percent (manufacturing of food), 8.9 percent (agriculture), and 10.9 percent (computer services). Two points merit underscoring: first, productivity gains for food are likely to be even higher than shown because several staple food products have their margin regulated, therefore biasing

<sup>103</sup> The analysis used a 10 percent decrease from the average price cost margin of 0.29 during 2012-16. Interestingly, the relationship between PCM and productivity growth, although negative on average, is U-shaped. These results are in line with Aghion et al. (2005) theoretical predictions.

their margin downwards (see below), and second, export sectors in both goods and services are those that have the most to gain from increased competition.

**Figure 66. What would be the labor productivity growth (in %) if PCMs were reduced by 10% on average Results aggregated by “2 digit” sector, 2012-16**



Source: World Bank Staff.

## Policies that Constrain Competition

Three economy-wide government interventions play a crucial role in either promoting or preventing competition in Moldova: an extensive *presence of SOEs*, frequently holding significant market shares and providing services in an environment lacking competitive neutrality; significant *tax incentives and grants* provided without sufficient compliance with state aid rules; and extensive *price controls* that may create significant hurdles to market competition and productivity in the Moldovan economy. As each of these economy-wide interventions is elaborated, it is important to notice the role played by the interaction of these government interventions with market features and strategic behavior of firms – be they public or private – in shaping competition dynamics.

### State enterprises with dominant positions

SOEs play a major role in Moldova.<sup>104</sup> Despite the significant number of SOEs, assets are fairly concentrated among the large firms. The top ten largest fully-owned public enterprises (central and local, without considering JSCs) control almost 72 percent of total SOE assets, engaging in key activities such as electricity networks, railways, urban transport, construction, and road infrastructure.<sup>105</sup> Similarly, even though state-linked companies (both fully and partially-owned) accounted for only 3.8 percent of all active enterprises and 9.9 percent of total manufacturing output in 2013 (WTO 2015), they are concentrated in key value chains.

According to preliminary data, SOEs are present in at least 41 sectors and subsectors. It is important to mention that due to its historical inheritance of a central planned economy, it is expected that Moldova

<sup>104</sup> The law on privatization of public property contains two definitions of SOEs: commercial public company (societate comercială cu capital public) - a company whose registered capital is wholly owned by the state or administrative-territorial unit; and public-owned company (societate comercială cu capital majoritar public) - a commercial company in which the state or the administrative-territorial unit holds a share package or a social share (share) which, at the general meeting of the company, grants more than 50 percent of all votes of the shareholders) or another proportion that provides the simple majority of votes. See Art. 2, Law N. 121 of 04.05.2007 on the administration and privatization of public property. For the purposes of this chapter, it will be considered that SOEs are only those companies in which the government owns at least 50 percent of the capital and that follows commercial principals. This includes both joint stock companies (JSC, partially owned by the private sector) and pure public companies (either local or central).

<sup>105</sup> Note that large JSC SOEs are not considered, such as "MOLDTELECOM" (telecommunications), "TERMoeLECTRICA" (energy generation), "RETELELE ELECTRICE DE DISTRIBUTIE NORD" (electricity transmission and distribution), and "Barza Alba" (wine).

would be counted with a significant presence of SOEs, including in sectors that normally are not provided by SOEs in other countries. Annex 6 shows the 41 sectors<sup>106</sup> where SOEs play an important role.

SOEs have a legal monopoly on railroad services and infrastructure, postal services (basic and parcel) and gambling; they have a *de facto* monopoly on electricity transmission, telecom backbone infrastructure and fixed lines, water collection, treatment and supply, passenger port terminals, and road infrastructure; finally, in network and infrastructure sectors in which SOEs effectively compete against private players, public companies still hold significant market participation, such as in electricity import, generation, and retail, and in mobile and Internet services. Beyond this, SOEs are found in other sectors and market segments that are typically served by the private sector. These range from hotels and restaurant services to movie theaters, media, road construction, retail trade, and real estate. Moreover, in manufacturing, SOEs have a big presence, but typically are in competition with private enterprises in pharmaceuticals, food (bread and wheat flour), beverages (wine), and glass (bottles).

### ***Anticompetitive effects?***

The widespread presence of SOEs in sectors with (i) concentrated market structures, (ii) high barriers to entry, and (iii) significant state aid raises several risks about the role of state enterprises on market performance. First, enterprises that are in dominant positions and are undisciplined by competition are likely to exploit their market power by increasing prices, lowering quality, or reducing variety, which can have adverse consequences for downstream buyers of products and services. This has adverse consequences for productivity and technological progress, and is particularly harmful in network industries that affect the productivity of the whole economy, such as telecommunications, transport, and electricity, that serve as key inputs to the overall economy. Second, there is a risk that these SOEs will use privileged access to policy makers to raise barriers to entry that preempt and crowd out private investments. Third, and related, they may receive subsidies and access to capital that confer competitive advantages and that could constrain the capacity of private players to enter markets and or/expand. Finally, subsidies in various forms may keep inefficient SOEs in the market when they would otherwise exit and allow more efficient firms to gain market share that would allow for productivity-enhancing economies of scale.

When there is a substantial presence of SOEs in the market, governments have to guarantee competitive neutrality, meaning that (i) all enterprises, be they public or private, domestic or foreign, face the same set of rules in a given market, and that (ii) market players should not receive any competitive advantages that are not available to all actual or potential competitors, such as aid provided by the government to its SOEs due their ownership links.<sup>107</sup>

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<sup>106</sup> Note that if the analysis would account for actual relevant product markets, this number would increase significantly.

<sup>107</sup> OECD, *Policy Roundtables, State Owned Enterprises and the Principle of Competitive Neutrality* (World Bank, 2009); China, *Embedding Competitive Neutrality Principles into the Framework Governing SOE Operations – Lessons from International Practice* (2016).

### **Box 9. Lack of Pro-competition Regulation, Conflict of Interest and an Independent Regulator in Railway Services**

The combination of (i) potential overlap between SOE ownership, SOE management, and sector regulation, (ii) lack of access rules, (iii) legal monopoly of bundled services provided by a SOE, and (iv) restrictive regulation on connected markets harm market outcomes.

First, Moldova does not have an independent regulator for rail services, which may create conflicts of interest in the sector and facilitate capture. Second, this risk is reinforced by the fact that Moldova currently lacks legislation that guarantees equal and nondiscriminatory access to rail freight, a key service for relevant agriculture value chains. Third, Moldova should consider eliminating the legal monopoly while promoting the unbundling of the services of infrastructure maintenance and freight services, allowing for entry of private investors and potential competition. Finally, until 2014, a SOE had a monopoly on passenger ticket sales. Since this market has been opened, at least six new players entered the market, but the SOE still has a significant presence: in June 2015, there were six privately-owned bus terminals and 26 owned by Railway Stations and Auto Stations. Given all the restrictions affecting these services, the Competition Council should work both to enforce antitrust rules to deter and sanction anticompetitive behavior and to advocate for less restrictive sectoral policies.

In this context, in 2012, the Competition Council found that the rail SOE abused its dominant position in the rail freight services market in Moldova by applying its international tariff for the rail freight services performed domestically. The SOE was sanctioned to pay MDL 1,389,04 thousand for its anticompetitive practice of price discrimination in line with the current competition legal framework in Moldova.

Source: World Bank Staff based on Competition Council, Republic of Moldova, *Activity Report of the Competition Council*. (2015): 16, 39.

#### ***Incipient steps toward reform***

Overall, the Moldovan government has taken steps towards a SOE reform agenda, but there are still several implementation gaps remaining. In the competition law issued in 2012 there are no antitrust exemptions for SOEs, and state-aid control applies equally to private and public companies. In 2017, a government decision<sup>108</sup> transferred to the Public Property Agency the management of numerous SOEs previously overseen by the line ministries, tackling some of the problems associated with the potential overlap between ownership, management, and regulation of SOEs.<sup>109</sup> Government service delivery and social or regulatory policy-making are largely incompatible with ownership, which is driven by costs recovery, accountability, and value creation. This new legislation is important to separate the public body that exercises the ownership rights in SOEs from the public body or bodies that regulate the sector in which the firm operates.<sup>110</sup> However, implementation still needs to follow recent legal reforms. See the example of the railway sector in Box 9.

Moldova lacks enough mechanisms to separate commercial and noncommercial activities of SOEs and to determine and monitor the true cost of public service obligations (WBG 2015). Even though SOEs should be adequately compensated by the government for the fulfillment of public service obligations – by nature operated under a deficit – companies should not be over-compensated. In the absence of clear quantification of the costs of SOEs' noncommercial objectives, it is hard to assess whether the failure to

<sup>108</sup> Government Decision no. 902/2017.

<sup>109</sup> This issue is still a problem in some sectors, notably rail transport, where the Ministry of Economy is both the regulator and the owner of the SOE I.S. "Calea Ferata din Moldova". The sector is one of the few network or utility sectors in the country without an independent regulator. Railway services are legal monopolies.

<sup>110</sup> However, this is yet to be fully implemented. This timeframe of 6 months extended to the first 4 months of 2018. The institutional reform of public property management has a transitory stage which is covered by the end of 2017. Until full implementation, ministries are also managing the SOEs. The rail services and the water agency are examples in which the regulator also controls the SOEs, See DECISION NO. 882, of 22.10.2014, for the approval of the Regulation on organization and functioning of "Apele Moldovei" Agency, its structure, and its limit.

perform efficiently is due to mismanagement or to the heavy burden imposed by the state (see case study on “The Cost of Social Bread” in Box 10). More importantly, SOEs can use funds from over-compensation to cross-subsidize commercial activities, which can result in harming competition, investment, and productivity. This is particularly relevant considering that state aid for Services of General Economic Interest (SGEI) represented 22 percent of all state aid reported (a majority being in the form of tax incentives and budget transfer between 2014-16), which was about 1 percent of the country’s GDP. The Competition Council should effectively assess the state aid given to SGEI, making sure it is used for that purpose by monitoring its application.

#### **Box 10. The Cost of Social Bread**

JSC "Franzeluta" is the largest bakery in Moldova. The central government owns about 53 percent of its shares. In addition to commercial products, the bakery must produce cheap “social bread”. In 2015 the approximate cost of one loaf of “social bread” was 5.70 MDL while at the same time the sales price set by the government was 1.50 MLD.

In 2014, during the annual shareholders meeting of JSC "Franzeluta”, the shareholders discussed a need to reorient production only to profitable bakery and other products. Shareholders expressed their concern over selling “social bread” below production costs and its effect on operational results, and requested adequate compensation from the government in addition to the symbolic supply of wheat from state reserves.

Private bakers in Moldova estimate that the production cost of “social bread” is three times higher than the sales price, claiming that dominance and the pricing policy of the state-controlled JSC "Franzeluta" may ruin not only the bakery market, but JSC "Franzeluta" as well.

It is important to mention that, in addition to using its SOE to sell products below cost, the government already controls the retail margin of both wheat flour and bread. Guaranteeing food security and affordable staple goods is a valid policy goal. However the government could reassess whether all these measures combined are necessary to achieve this goal, and if costs are effectively lower than benefits. Particularly in a sector where there is private investment along the entire value chain (production of wheat, manufacturing of flour and bread), government intervention may be crowding out efficient players and distorting market outcomes, productivity, and jobs.

Source: World Bank Staff based on WBG, *The Republic of Moldova. Support to State Owned Enterprises (SOEs). Preliminary diagnostics and reform assessment. Phase I* (World Bank, 2017): 29-30.

The lack of regulatory neutrality is reflected in different corporate rules benefiting certain types of SOEs. Moldova maintains a parallel legal regime with separate laws on municipal and central government owned companies (Întreprindere Municipală – I.M., and Întreprindere de Stat – I.S.) and Joint Stock Companies – JSCs.<sup>111</sup> Lack of regulatory neutrality affects several dimensions of business management and performance, from financial accounting obligations to bankruptcy and liquidation. For example, the state property of public domain managed by SOEs is normally not owned by the SOE and is not subject to private law, meaning it cannot be affected by damages or debts or be subject to any statute of limitations.<sup>112</sup>

<sup>111</sup> Law 146 of September 16, 1994, applies to SOEs regulating the establishment, administration, and eventual winding up of enterprises executing governmental tasks and with only one owner, the State. The governance of JSCs is regulated by Law 1134 of April 2, 1997.

<sup>112</sup> The state and municipal companies in Moldova are governed mainly by three legislations: the Law on State Companies approved in 1994, The Law on Public Property of Local Administrative Units approved in 1999 and the Law on Local Public Administration approved in 2006. While Law 146 of September 16, 1994, applies to SOEs regulating the establishment,

Similarly, only SOEs identified as “public interest entities” have the obligation to adhere to corporate governance law and follow international financial statement rules, meaning that all other SOEs (including JSCs) don’t have to comply with the recently issued governance code.<sup>113</sup> Additionally, even though there are rules regarding minimum dividends to be disbursed every year by SOEs, the government carves out some of the public companies from this obligation, allowing selected players to reinvest profits.<sup>114</sup>

Furthermore, the lack of clarity on the application of tax benefits, limited public procurement requirements, and trade restrictions affecting sectors controlled by SOEs may further unlevel the playing field. At the same time, the recently approved public procurement legislation does not apply to a series of sectors in which SOEs compete against private players while holding relevant market positions, for example, services on energy, water, transport and post, media and broadcasting, and public telecommunications networks.<sup>115</sup> Similarly, even sectors that are covered by public procurement rules and count on private providers are still dominated by SOEs owing to insufficient procurement efforts. For example, road maintenance is a relevant segment of the construction industry in Moldova which is currently dominated by the public sector: road maintenance funding increased from MDL 583 million in 2010 to MDL 1,116 million in 2014 – about 1 percent of the GDP.<sup>116</sup> Although the private sector has the capacity to provide road construction services, the government is still timid in the promotion of open tenders for these types of services.<sup>117</sup>

All of these areas suggest policies to improve transparency and government oversight would help promote competitive neutrality in Moldovan markets for goods and services.

### **State aid: effects on competition**

If not carefully designed, government direct support measures to market players, whether public or private, can be detrimental to productivity growth. The government can directly support market players through various forms, including tax exemptions, loan guarantees, provision of resources below market prices, subsidies, and capital injections. Many jurisdictions, including Moldova, developed state-aid frameworks to embed competition principles in government support measures and therefore minimize economic distortions. Such frameworks are important to define what type of government support is potentially harmful (and what is not), and what should be done to minimize economic distortions while still promoting intended policy goals such as creating jobs, reducing pollution, promoting regional development, investing in R&D, or increasing access to services or goods. In this context, state-support measures falling under the definition of state aid can be broadly defined as “an advantage in any form conferred on a selective basis to undertakings by national public authorities”.

In Moldova state aid amounted to 4.9 percent of GDP in 2011-13 (WTO 2015), declining to 4.3 percent in 2014-16. Most of these transfers were tax incentives (budget revenue waivers) – averaging about 85

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administration, and eventual winding up of enterprises executing governmental tasks and with only one owner, the State, the governance of JSCs is regulated by Law 1134 of April 2, 1997, which provides a standard framework for all companies

<sup>113</sup> See law n. 113 of 27.04.2007 on accounting; See the national commission of the financial market decision NO. 67/10 of 24.12.2015 on the approval of the Corporate Governance Code, available at <http://lex.justice.md/viewdoc.php?action=view&view=doc&id=363619&lang=1>.

<sup>114</sup> See Decision n. 482 of 25.06.2014 regarding the exemption of certain economic agents from paying dividends or the breakdown in the state budget of part of the net profit obtained in 2013.

<sup>115</sup> See article 4, LEGE Nr. 131 of 03.07.2015 on public procurement.

<sup>116</sup> See WTO *Trade policy review report by the secretariat Republic of Moldova* (WT/TPR/S/323, 2015). Available at [https://www.wto.org/english/tratop\\_e/tp\\_r\\_e/s323\\_sum\\_e.pdf](https://www.wto.org/english/tratop_e/tp_r_e/s323_sum_e.pdf).

<sup>117</sup> See Study on Competition in the Sphere of Public Procurement in the Republic of Moldova. Support to the Competition Council in the Republic of Moldova. EuropeAid/136194/DH/SER/MD.

percent over the entire period.<sup>118</sup> Transfers from the budget were roughly 15 percent of total support over the period.

**Box 11. Market Features, State Aid, and Policy Interventions Harming Competition in the Air Transport Services**

Air travel to and from the Republic of Moldova is characterized by limited choices and high costs. There are several market characteristics that may prevent better market outcomes, such as *de facto* monopoly on ground services, lack of competitive neutrality, and price controls.

- The concession of the Chisinau Airport, valid for more than 40 years, did not count on an open bid process and the benefits conceded by the government for the winning investor were not reviewed under the state-aid control regime. There are few incentives for the infrastructure to be managed efficiently.
- Even though ground services at the airport are open to entry, there appears to be a lack of competition in a multitude of them, including aircraft refueling at Chisinau Airport, which appears to be a *de facto* monopoly of a private company.
- Air Moldova, controlled by the government until October 2018 and the main provider of air transport services, received reported state aid of MDL 21 million in 2014 and MDL 75 million in 2017. These amounts combined represented 18 percent of its 2018 assets, while the company has been working under significant and continuous losses – in 2017 losses were -MDL 190.424.990,00 and capital was already reported as more than MDL 80 million negative.
- Finally, prices for regular flights are regulated based on the Regulations of the Civil Aviation Authority Republic of Moldova (CAA) no. 88/GEN from 17.12.2001. The CAA may refuse “abusive prices” (either excessively increased or excessively reduced), but the way in which these are determined is questionable. Controlling prices may severely hinder market dynamics, investment, and productivity in the sector without there being market failures that would justify such interventions.

Source: World Bank Staff based on WBG, *Moldova: Minimizing Distortions to Functioning Markets. A Review of State Aid Elements in Relation to An Airport Concession* (2014).

Chapters 2 and 4 of this report discuss in some detail the shortcomings of Moldovan tax incentives. As shown, they tend to be insufficiently targeted, without clear objectives, unmonitored as to performance, and poorly administered. In this way, they can simply waste resources and lower tax revenues that can be used for more productive purposes. More importantly, they can end up distorting market competition by conceding undue advantages to specific players that can prevent entry and/or expansion of efficient firms and prevent investments. Air transport is one example (See Box 11).

Here the concern is that anticompetitive effects of state aid may directly undercut productivity, including creating or protecting dominant players, thus facilitating anticompetitive behavior, discouraging *beneficiaries* from enhancing productive efficiency and innovation, or driving out of the market *non-beneficiaries* who would otherwise be more or equally efficient as beneficiaries. It is not known what portion of the 4.3 percent of GDP went to SOEs as opposed to foreign investors in the FEZs, to private domestic firms, or to decentralized parts of government for transfer to the private economy. It is probable that much of the “sectoral aid” recorded in the State Aid Report (2016) went to SOEs. These were tax incentives and subsidies that averaged 17 percent of total state aid, or about 0.8 percent of GDP during

<sup>118</sup> This is evident when examined through the lens of providers of state aid. Aguiar-Falco (2018) reports that most state aid – roughly three quarters – was provided by the customs service.

2014-16. The same is true for state aid provided to compensate for services of general economic interest (SGEI). In Moldova, the majority of this was provided by SOEs and accounted for 22 percent of total aid between 2014 and 2016.<sup>119</sup> Of the remaining state aid, the great bulk went to “horizontal” aid – R&D, environmental protection, SME support, and training – as well as to regional development programs, cultural heritage, and natural disaster relief.<sup>120</sup> See Annex 12 for a detailed breakdown of state aid based on their objectives.

***Increasing monitoring and transparency of state aid would promote competition***

Even though a state-aid framework based on EU standards has been in place since 2012, effective implementation of state aid rules by all public stakeholders stands out as a key constraint leading to an unlevel playing field in Moldova. For 2016, the Ministry of Finance and its subordinate administrations presented incomplete information on support measures in the form of tax incentives. A joint task force from the Ministry of Finance and the Competition Council estimated nonreported aid of almost MDL 3,000,000 thousand, 110 percent of the reported volume for 2016. Most of the support measures reported for the period 2014-16 were granted by the Customs Authority, which accounted for about 88 percent of the total reported measures in 2016.<sup>121</sup> In monitoring existing state aid, priority should be given to identifying and reviewing state aid to large SOEs, notably in the form of tax exemptions, and aligning this with state aid provisions.<sup>122</sup>

Moreover, it is important to guarantee that the investment promotion programs of the country are compliant with its state-aid control framework, for example with the criteria for state aid for regional development, to avoid potential restrictions to competition, as it is fully discussed in the FDI chapter.<sup>123</sup> Otherwise, exemptions will often result in rent-seeking by firms engaging in nonproductive behavior in order to obtain an incentive. There are risks of high administrative costs for both firms and the government through cumbersome procedures for granting and monitoring incentives, and of economic distortions resulting from reallocating resources to sectors benefiting from incentives. These risks and many others were identified by a WBG technical assessment regarding the possible presence of distortive state-aid elements in the Free Economic Zones (FEZ) legislation in Moldova.<sup>124</sup> The study concluded that

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<sup>119</sup> Given the significant volume of state aid provided to SGEI in recent years— on average, 1 percent of the GDP per year between 2014-16 -, the Competition Council should strengthen transparency and accountability to guarantee that the recipient undertaking does provide public service obligations and that these obligations are clearly defined. See the regulation on state aid granted for the beneficiaries which provide services of general economic interest, Approved by the Decision of the Plenum of the Competition Council No 11 of August 30, 2013.

<sup>120</sup> In 2014-15, the SGEI also received a large portion of tax and subsidies (35 percent and 19 percent, respectively), but by 2016 these had been reduced to 8 percent of the total.

<sup>121</sup> In addition to the significant amount of nonreported aid, the Competition Council only reviews a fraction of the reported aid. Out of the total officially reported aid for 2016 (MDL 2,670,798 thousand), only MDL 54,444 thousand (2.04 percent of the total reported value) was reviewed and authorized by the Competition Council. This means that despite the existence of a state-aid framework, 98 percent of the aid falls through the cracks of the system. Most of these values refer to existing aid (measures enacted before the 2012 state-aid law), meaning that these schemes have not faced scrutiny. In this context, it is necessary to deepen the Competition Council’s capacity to systematically review existing aid, notably those that are sector-specific or disbursed through tax benefits.

<sup>122</sup> The monitoring of state aid in progress is one of the responsibilities of the Competition Council. According to art. 20 of the Law on State Aid and point 84 of the Regulation on the form of notification, the Competition Council monitors state aids in progress to verify compliance with the provisions of the legal acts under which they were granted and the authorizing decisions it has issued. In this respect, 19 support measures authorized by the Plenum of the Competition Council in the period 2014-16 were monitored. Cases monitored included aid provided to SOEs in the water, waste management, post, and electricity sectors. Report on State Aids Granted in the Republic of Moldova during 2016.

<sup>123</sup> Eligibility criteria for state aid is defined by the Regulation on state aid for regional development, approved by the Decision of the Plenum of the Competition Council No. 4 of August 30, 2013.

<sup>124</sup> See WBG, *Moldova: Minimizing Distortions to Functioning Markets. A Review of State Aid Elements In Relation to Free Economic Zones* (2014).

the fiscal incentives for FEZ residents had to be considered as operating aid, which is in principle prohibited by the state-aid framework. Under the Association Agreement signed with the EU, Moldova has committed to bring its FEZs benefits into compliance with its state-aid rules and EU standards by 2024.

Finally, the Competition Council has designed a state-aid registry to gather detailed information from different government bodies providing aid in Moldova. Implementation of it began in 2015, and in 2016 a regulation on the registry was approved by the Government Decision no.1112 of 06.10.2016. By the end of 2016, 88 percent of entities reporting state aid completed their submissions through the electronic system.<sup>125</sup> This initiative is essential to generate the level of transparency needed to guarantee that state aid granted in Moldova does not distort competition in a significant way. A further step would be to make this database available to the public, boosting accountability.

### **Price controls in lieu of competition: a way to improve productivity?**

Price controls can have unintended negative effects on markets.<sup>126</sup> They can act as a focal point for collusion and can lead to an inefficient allocation of resources and high costs for governments to sustain the policy. Price ceilings can lead to reductions in supply or to shortages that would harm consumers rather than be beneficial to them, and may reduce quality or innovation. Minimum prices, on the other hand, prevent more efficient firms from competing in the price dimension. Generally, price regulation – to mimic a competitive outcome - is only used in markets where there is a natural monopoly.<sup>127</sup>

To promote either social or economic goals through price regulation, the government should be able to differentiate products and services that could be supplied by private players under prevailing market conditions from those markets that are characterized by natural monopolies – with subadditivity of costs – and require long-term tariff control. In cases where competition is limited as a result of regulations or other government interventions, it would typically be more effective to find less distortive alternatives to those regulations (for example, remove import restrictions or eliminate monopoly rights) than to control prices.

In workably competitive markets with several players – as is the case of most staple goods and retail services – price controls can act as a focal point for collusion and can lead to an inefficient allocation of resources and high costs for governments to sustain the policy. In the specific case of margin controls, the government takes the risk of enabling abuse of market power or rent seeking once there is information asymmetry between providers of goods and regulators regarding costs of production, transport, and retail. In Moldova, although there is no clear market basis for intervention, the government controls retail prices of fuel, tobacco, pharmaceuticals, air transport services, and several food products. If there are circumstantial needs to intervene in these markets, for example due to short-term price hikes of socially relevant products, there are mechanisms to minimize potential distortions. Prices should be set independently from producers, be time-bounded, and be reviewed periodically. Policy makers should also assess less-restrictive alternative policies, such as consumer subsidies rather than producer subsidies.

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<sup>125</sup> The Competition Council developed an online state-aid portal to increase transparency of state aid that was granted. More than 170 public entities reported state aid to the Competition Council between 2014-16 (State Aid Report, 2016), while a similar number of public officials were trained on state-aid design, analysis, and reporting within the Competition Council and the central and local administration. These efforts were supported through the World Bank Group's Global Investment Climate Project on Competition (P595187) – Pilot Technical Assistance Project on Strengthening the State Aid Control Framework (2013-2016).

<sup>126</sup> For example, in a recent study on the impact of targeted price controls for supermarket products in Argentina from 2007 to 2015, results show that, contrary to common beliefs, firms compensate for price controls by introducing new product varieties at higher prices. See Diego Aparicio and Alberto Cavallo. "Targeted Price Controls on Supermarket Products" (NBER Working Paper No. 24275, 2018): Feb. Available at <http://www.nber.org/papers/w24275>.

<sup>127</sup>

At the same time, the government should limit tariff controls to sectors and market segments characterized by natural monopolies – such as water and sewage, electricity transmission, and wholesale gas. In some cases, it would be necessary to regulate not only access prices but also final prices in the downstream market until the services are unbundled and until regulations that enable competition in downstream markets are in place. On the other hand, downstream markets of natural monopolies already functioning under competition should not be targeted by price controls.

***Food products: higher prices, less supply?***

The case of food products is a good example. The government controls margins of 13 staple food products (See Box 12). Food products classified as socially important have their retail margins controlled, meaning that prices must equal wholesale acquisition costs plus a margin defined by the government. It is not clear how the government monitors compliance or verifies the effective costs of wholesale costs. Sellers must discriminate between wholesale and applied margin in invoices, but the legislation is silent regarding how costs are reported. For most affected goods, the maximum margin is 20 percent; bread has a 10 percent margin cap. More importantly, although the goods selected form part of a basic food basket, most of them could be provided by private players under free market conditions, and the policy does not clarify the market failures that justify controlling these prices.

In addition to the risks imposed by regular price-control policies, controlling margins in an environment of information asymmetry between regulator and market players may lead to inflated costs to overcome margins restrictions, leading to higher final prices, and potentially facilitating collusion. See Box 13 on how the interaction between different government interventions, including price controls, and other market features work to reduce competition.

**Box 12. List of Important Social Products (Tariff Items according to the Combined Nomenclature of Goods)**

Goods include:

1. Bread up to 600 grams (1905)
2. Colac up to 300 grams (1905)
3. Milk for dairy cows with a fat content of up to 2.5 percent (excluding ultra pasteurized milk - UHT) 3 (0401)
4. Kefir with a fat content of up to and including 1.0 percent (0403)
5. Fresh cow's cheese with a fat content of up to 5 percent inclusive, not containing added sugar (0406)
6. Cows' milk fat containing less than 10 percent fat (0401)
7. Cows' milk fat containing less than 79.0 percent fat (0405)
8. Sunflower-seed oil, with the exception of deodorized oil (1512)
9. Wheat flour, excluding durum wheat flour (1101)
10. Rice, excluding specialized rice (1006)
11. Buckwheat (1008)
12. Groats, including oats and meal (1103, 1104)
13. Infant formulas and preparations for infants and young children (0402)

When selling important social products, legal and natural persons are obliged to indicate in the invoice the purchase price or delivery price and the amount of the cumulative commercial additions applied. In case of violation of the formation and enforcement of prices for important social products, legal and natural persons shall be liable to civil and criminal law.

*Source: World Bank Staff based on Government Decision no. 774 of 20.06.2016 on the prices of marketing of important social products*

The outcome appears to be higher consumer prices and less competition. Retail food prices for selected products on average appear to be higher than in comparator countries, notwithstanding the presence of margin controls. The government is regulating the prices of some socially important food products,

including milk, bread, rice, and cheese, part of the sample in Table 3. Comparing food prices in Moldova to those in the Organisation for Economic Co-operation and Development (OECD) and selected ECA countries (Bulgaria, Croatia, Georgia, Kazakhstan, Romania, and Ukraine) point to average prices being about 53 percent higher in Moldova, after controlling for potential demand and cost factors such as income per capita, import costs, and tariff rates (Table 3).<sup>128</sup>

This result holds for a detailed comparison of 14 individual products at both the country level and the municipal level (Chisinau against comparator cities) with comparator cities abroad. The analysis at the product level suggests that 71 percent of the products have statistically-significant higher prices at the national level, and 64 percent of them have higher prices at the main municipality (see Annex 7).

**Table 3. Price comparison analysis: Moldova vs. comparator countries in the OECD and selected ECA countries**

	(1)	(2)	(3)
Moldova	0.573*** (0.148)	0.576*** (0.151)	0.536*** (0.165)
Log of GDP per capita PPP (2011 international \$)	0.698*** (0.078)	0.686*** (0.084)	0.705*** (0.093)
Log of cost of import		-0.049 (0.089)	-0.044 (0.088)
Tariff rate, applied			0.033 (0.040)
No. of observations	2712	2712	2712
R-squared	0.868	0.869	0.871

Source: World Bank Staff Notes: Results are from an OLS regression using 2013-2017 data from Numbeo. The dependent variable is the logarithm of market prices (US\$/kg) of the following products: Milk (regular, 1 liter), Loaf of Fresh White Bread (500g), Rice (white, 1kg), Eggs (12), Local Cheese (1kg), Chicken Breasts (Boneless, Skinless, 1kg), Beef Round (1kg, or Equivalent Back Leg Red Meat), Apples (1kg), Banana (1kg), Oranges (1kg), Tomato (1kg), Potato (1kg), Onion (1kg), Lettuce (1 head). Standard errors clustered at the country level are in parentheses. \*\*\*, \*\*, and \* indicate significance at 1 percent, 5 percent, and 10 percent. In addition to OECD economies, the sample includes Bulgaria, Croatia, Georgia, Kazakhstan, Romania, and Ukraine.

Moreover, two of the four products with margin controls (cheese and rice) have higher prices, and the other two do not have statistically different prices (bread and milk). To find a sustainable solution to issues of high prices, it would be advisable to conduct in-depth market assessments to identify the root causes of potentially high prices and advocate for reforms to boost competition. For example, import restrictions can result in higher prices.

<sup>128</sup> Note that this exercise is an average for all 14 products covered by the Numbeo database, as discriminated on notes of both Tables 1 and 2. From these 14 products, only 4 are included in the list of price controls: milk, bread, cheese, and rice. As discussed below, even for some of the products that have their margins controlled by the government, such as cheese and rice, average prices seem higher in Moldova. However, for bread and milk, other products affected by margin controls, prices are not statistically different between Moldova and comparator countries. See Annex 7 for a comparison by products of the level of prices in Moldova compared to OECD countries and in Chisinau and OECD selected cities.

### **Box 13. Market Features and Policy Interventions in the Sunflower Oil Value Chain**

*Market structure.* The main corporate player is vertically integrated along the value chain covering farming, storage facilities, manufacturing of oil, transport, and port terminals. It controls: (i) about 55,000 hectares of agricultural land, mostly through leases; (ii) storage facilities with capacity for 750,000 tons – about 20 percent of Moldova yearly grain production; (iii) about 80 percent of local market share of bottled oil; (iv) its own transport fleet, with 40 plus trucks and 80 grain wagons leased with the SOE rail company; (v) one of two grain terminals and the only vegetable oil terminal in the Giurgiulesti port; and (vi) between 40 to 50 percent of grain exports in the country.

*Policy interventions.* First, retail margins of sunflower oil are controlled. Secondly, at the same time, foreigners cannot buy agricultural lands in Moldova – which is a clear restriction on a level playing field and can further reduce the capacity of the agriculture sector to attract entry and investments. Third, agriculture aid – which can amount to 1 percent of the GDP - is not covered by the state-aid framework. Fourth, Moldova does not follow the same Sanitary and Phytosanitary (SPS) certification standards required by Romania and the EU regarding agriculture products, and the market for certification laboratories is currently a *de facto* monopoly of a SOE. Finally, Moldova does not have rules on access rights for rail freight and terminal services, which are two key transport and logistics bottlenecks that are controlled by dominant players.

*The combination of market structure and policy interventions indicate several risks to competition.* The combination of a player who controls storage, manufacturing, and export logistics with the lack of a right of access to key logistics services leaves independent producers of sunflower without bargaining power to negotiate with vertically integrated players. With the retail margins of sunflower oil controlled, those along the chain with greater market power will be able to retain most of the profit, squeezing those in a weaker position and reducing incentives for entry upstream. At the same time, the control of margins may facilitate collusion among market players who will have the incentive to inflate disclosed costs in order to increase profits. In 2013, the Competition Council initiated market studies to understand the competition dynamics of the purchase, storage, and transport of wheat and sunflower seeds, as well as the commercialization of sunflower oil (Plenum Decisions no. 26 of 16.08.2012 and no. 6 of 25.10.2013).

The first results of the Council's initiative did not show enough indicia of abuse of dominance, and the Council continues to monitor the sector. Given the market structure and government interventions affecting this sector, the continuous monitoring of market behavior is advisable.

Source: World Bank Staff based on *ArtSource: Elaborated by the Markets and Competition Policy team* (2015b); Art. 6, Law no. 1308 of 25.07.1997 on the normative price and the way of sale and purchase of the land; Official Trans-Oil website, available at <http://transoilcorp.com>; [Official website of Giurgiulesti International Free Port, available at http://gifp.md/en/news/organic-grain-terminal-operated-by-prograin-organic-srl-opened-at-giurgiulesti-international-free-port/](http://gifp.md/en/news/organic-grain-terminal-operated-by-prograin-organic-srl-opened-at-giurgiulesti-international-free-port/).

### **Pharmaceuticals**

The case of pharmaceuticals is also important. Moldova also controls wholesale medicine prices and retail margins of both prescription and nonprescription medicines. Pursuant to article 6/1 of the Law no. 1409/1997 on medicines, the prices of medicine, regardless of whether it is prescribed or not prescribed by a doctor, are registered in the State Registry of Prices for medicine.<sup>129</sup> Pursuant to article 20 of the Law no. 1456/1993 on pharmaceutical activity, retail profit margins are limited to maximum ceilings. The

<sup>129</sup> The prices may not be higher than a certain threshold calculated and approved based on the provisions of the Government Decision no. 525/2010 on the approval and registration of prices for medicine from producers

margin thresholds vary from the production price as included in the registry, ranging between 16 percent (5 percent for wholesalers and 11 percent for pharmacies when production prices are above 240 MDL) to 40 percent (up to 15 percent for wholesalers and 25 percent for pharmacies when production prices fall below 30 MDL). At the same time, producer prices are bound by the average of a basket of international prices reviewed annually<sup>130</sup> that currently includes goods from Hungary, Croatia, Romania, Slovakia, Greece, Serbia, and Lithuania.

Even though it is a worthy policy objective to guarantee affordable medicines for the population, the government should reassess if controlling margins is the most effective mechanism to achieve this goal. For example, by applying similar restrictions to different segments of the market (for example, prescription and nonprescription), the policy may discourage entry and investment that could lead to greater competition, more variety, and potentially lower prices for all products, both essential and non-essential. Similarly, the government could consider less restrictive interventions, for example subsidizing the acquisition of essential medicines by vulnerable people rather than controlling prices, and allowing market players to compete to be the supplier. Considering that pharmaceuticals represent a significant share of the GDP – imports in 2017 reached US\$223 million, almost 3 percent of the GDP - distortions in this market can have significant effects on both consumers and the overall economy.<sup>131</sup>

In addition to price controls, the government also restricts the establishment of pharmaceutical retail stores. Law no. 1456/1993 affirmed that newly established subsidiary stores shall be located at least 250 meters away from an existing pharmacy branch. Demographic criteria can also be used to establish new stores - municipalities, cities, district centers, and other localities with between 3000 to 4000 inhabitants shall be served by city owned SOEs. The Competition Council has issued an opinion regarding some of the anticompetitive effects of such legislation, leading to partial reforms in 2017.<sup>132</sup> The combination of restrictions on where stores can be established, controls on margins of retail prices, and mandatory creation of SOEs in smaller localities may hinder entry, investment, and expansion of the private sector.

### ***Petroleum products***

The government also controls the price of petroleum products.<sup>133</sup> Margins for retail of fuel products are fixed annually and used to calculate ceiling retail prices (on a monthly basis) to be applied in the whole country. The methodology used to calculate margins and retail prices since 2016<sup>134</sup> was reviewed after a

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<sup>130</sup> Article 4. "(7) drug producer price proposed to be the average price of the three lowest producer prices for the same drugs in reference countries with which a comparison, which have a population of up to 25 million citizens, referred to in point 7 of this Regulation". See GOVERNMENT DECISION NO. 525 of 22.06.2010 for the approval of the regulation on the method of approval and registration of producer prices for medicines.

<sup>131</sup> These restrictions can also lead to transfer pricing behavior, when companies import products through related parties and account for profits abroad, affecting the capacity of local players to compete and generating revenue losses to the government. A deeper assessment of the pharmaceutical sector is warranted to understand market dynamics, identify competition constraints, and propose procompetition policy solutions.

<sup>132</sup> See Competition Council. Republic of Moldova. Activity Report of the Competition Council in 2017, p. 25.

<sup>133</sup> Art. 4. (...) 3 The wholesale prices of the main petroleum products and liquefied gas shall be determined on the basis of the purchase prices according to quotations on the regional petroleum stock exchanges, including "PLATT'S", from the taxes and duties on these products, from the consumption and expenses related to the activity import and wholesale, in accordance with national accounting standards, applying a reasonable rate of return as set out in the Methodology for the formation and application of petroleum product prices. 4. The retail prices of the main petroleum products and liquefied gas shall be determined on the basis of wholesale and retail sales, in accordance with national accounting standards, applying a reasonable rate of return, provided in the Methodology of the formation and application of prices for petroleum products and liquefied gas. Law no. 461 / 30.07.2001

<sup>134</sup> national regulatory agency for energy. Decision no. 102 of 31.03.2016 on the approval of the methodology for the formation and application of petroleum products prices. Available at <http://lex.justice.md/md/364822/>.

public consultation between July and September 2018.<sup>135</sup> For 2018, the margin was fixed at MDL 3.25/liter and maximum retail prices for the period July-August 2018 were set at MDL 19.01/liter for petrol and MDL 16.89/liter for gas oil.<sup>136</sup> Since January 2019, an amendment to the petroleum products law demands a maximum annual rate of return of 10 percent to be applied in the retail of petroleum products. Based on this legislation, a new methodology for price calculation was issued in March 2019.<sup>137</sup>

#### **Box 14. Price Controls and Anticompetitive Practices in Retail: the Case of Fuel**

The retail of fuel appears to be a relatively concentrated market in Moldova. Even though about 70 players have licenses to provide services – according to the Energy Regulator - three players appear to control at least 50 percent of the market share in the country. One of these companies, holding between 15-20 percent, is controlled by politically-connected investors. The combination of SOEs along the chain, price controls, burdensome requirements to obtain licenses for both retail and import, and the presence of politically-connected people raise flags about potential anticompetitive policies and market behavior.

In this context, the Competition Council identified and sanctioned a cartel in the sector in 2015 that had been active since 2011. In Decision no. CNP-18/53-07/11 dated 17.02.2011, the ANPC (competition entity preceding the Competition Council) found the existence of coordinated activities of the economic agents: ÎCS "Lukoil Moldova" SRL, ÎCS "Petrom - Moldova" SA, ÎCS "Bemol Retail" SRL, ÎM "Rompetrol Moldova" SA, ÎM "Tirex Petrol" SA, SC "Parstar Petrol" SRL and "Valiexchimp" SRL, related to the simultaneous determination of identical retail prices of gasoline.

However, the decision of the Competition Council was reversed by the court in the first instance. According to the courts' decision, the identical prices for the marketing of petroleum products were not due to a secret agreement between oil companies but were a logical consequence of the methodology of calculation and application of prices to petroleum products approved by the Energy Regulator. According to the regulation, fuel retailers, with at least three days before applying the new prices, were to submit to the regulator the calculations. Thus, in the opinion of the courts, the fact that the information that was related to price behavior was accessible to various economic agents, led to price coordination.

This case generated a discussion regarding the rationality of the methodology and led to proposed changes in Law no. 223 of 03.12.2015. The price controls persist, though.

Source: Competition Council, Republic of Moldova, *Activity Report of the Competition Council (2015)*: 27.

The legislation also imposes constraints on issuing licenses which restrain competition. To receive a license to import and provide for wholesale trade of gasoline, diesel oil, and liquefied gas, the regulation requires (i) minimum oil storage facilities of 5000 cubic meters or storage of liquefied gas in a minimum volume of

<sup>135</sup> See official website of the National Agency for Energy Regulation. <http://www.anre.md/ro/content/anre-ini%C8%9Biaz%C4%83-consultarea-public%C4%83-proiectului-de-modificare-%C8%99i-completare-metodologiei>. Official Gazette no. 285-294 of 03.08.2018 of the Law no. 152 of July 20, 2018 for the amendment of the Law no. 461/2001.

<sup>136</sup> National Agency for Energy Regulation. THE ADMINISTRATIVE BOARD DECISION no.150 / 2018, art. 1. Available at <http://www.anre.md/files/acte/Hotarirea%20nr.150%20MCS2018%20ro.pdf>. The specific trade margin of 3.25 lei / liter included: the first refinery supplier; the cost of transporting and insuring oil products in other countries; charges for customs procedures and payment for emissions of pollutants; expenses for currency conversion; transportation, storage and marketing of petroleum products on the territory of the country (expenses related to the depreciation of fixed assets for commercial purposes, salaries, social insurance and health insurance of employees, current repair of commercial assets, expenses related to the rental of commercial assets; expenditures from commercially-related commercial utility targets, electricity, heating and so forth.; regulatory losses of petroleum products (perishability); other justified and necessary expenses related to the import and marketing of the main petroleum products; and the profit from the retail business of petroleum products.

<sup>137</sup> See official website of the National Agency for Energy Regulation, available at <http://www.anre.md/ro/content/anre-aprobata-noua-metodologie-privind-formarea-%C8%99i-aplicarea-pre%C8%9Burilor-la-produsele>

150 cubic meters,<sup>138</sup> and (ii) minimum capital of MDL 8 million Moldovan lei.<sup>139</sup> Additionally, for import, players engaged in the wholesale and retail trade of gasoline, diesel, and liquefied gas have to pay license fees varying between MDL 13,000 per station (retail of liquid gas), MDL 26,000 per station (retail of gasoline/diesel in urban areas) and MDL 260,000 flat fees (import and wholesale).<sup>140</sup> Fees have to be paid annually, and licenses expire every five years.<sup>141</sup> In comparison, licenses for generation, transmission, distribution, and retail of electricity cost MDL 3,250 each, and last between 10 and 25 years.<sup>142</sup> The Competition Council has already issued an opinion regarding the potential anticompetitive effects of such restrictions.<sup>143</sup> The combination of restrictions to price and licenses to import or retail can facilitate anticompetitive practices (see Box 14).

Finally, some sectors with presence of SOEs and other relevant government interventions, such as price controls, face import license restrictions that may be benefiting the market position of public companies.

## **Institutions to Promote Competition: Law, Enforcement, and Advocacy**

Competition laws can promote market efficiency, low prices, and high quality in goods and services by opening markets to business entry and providing a level playing field.<sup>144</sup> To that end, competition laws typically cover business practices that restrict, distort, or prevent competition among firms, ranging from agreements and concerted practices among competitors to unilateral abuses of market power by dominant players. In addition, laws contain provisions to control market structure, that is, merger control, to prevent harm in the competitive process either due to unilateral effects or facilitation of concerted practices that may result from the economic concentration. At the same time, competition authorities have the important role of serving as advocates within the government and for the general public regarding pro-competition policy design and implementation as well as procompetitive market behavior.

### **The legal framework is generally sound but needs improvements in some key areas**

The Government of Moldova developed its competition and state-aid control policy framework with the adoption of new competition and state-aid laws in 2012 in line with international standards, notably the EU rules.<sup>145</sup> The Competition Council was set up as a politically, technically, and financially independent agency reporting to the Parliament and began to operate effectively in 2014.<sup>146</sup> The law provides for all the main elements of a sound competition law, including the coverage of all economic sectors and both public and private market players,<sup>147</sup> per se illegality of hardcore cartels,<sup>148</sup> behavioral assessment of dominant positions,<sup>149</sup> premerger notification with objective and independent thresholds for

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<sup>138</sup> Article 14 paragraph 1 letter a) and b) of Law no. 461 / 30.07.2001

<sup>139</sup> Article 14 paragraph 1 letter a) of Law no. 461 / 30.07.2001.

<sup>140</sup> See official website of the National Regulatory Agency for Energy, available at <http://www.anre.md/ro/content/activit%C4%83%C5%A3i-licen%C5%A3iate-pe-pia%C5%A3a-produselor-petroliere>

<sup>141</sup> Law no. 461 / 30.07.2001.

<sup>142</sup> See official website of the National Regulatory Agency for Energy, available at <http://www.anre.md/ro/content/activit%C4%83%C5%A3i-licen%C5%A3iate-pe-pia%C5%A3a-energiei-electrice-0>

<sup>143</sup> See Competition Council. Republic of Moldova. Activity Report of the Competition Council in 2017, p. 30.

<sup>144</sup> There is established empirical evidence on the positive impact of a sound antitrust framework and its enforcement on productivity growth. See, for example, Buccrossi (2013).

<sup>145</sup> See Competition Law n. 183 from 11.07.2012.

<sup>146</sup> Council plenum members cannot hold other jobs, cannot rule on cases in which they have conflict of interests, are obliged to respect confidential information, have fixed mandates of five years, are appointed by the Parliament, can only be removed based on objective criteria and by decision of the majority of the parliament.

<sup>147</sup> See article 2, Competition Law n. 183 from 11.07.2012.

<sup>148</sup> See article 7, Competition Law n. 183 from 11.07.2012.

<sup>149</sup> See articles 10 and 11, Competition Law n. 183 from 11.07.2012.

notification,<sup>150</sup> capacity to issue interim measures, advocacy mandate,<sup>151</sup> right to seek civil redress,<sup>152</sup> a leniency framework,<sup>153</sup> and due process rules.<sup>154</sup> In addition, the Competition Council has advanced its implementation by issuing key bylaws and regulations on topics such as merger notification and control, establishment of dominant position and its abuse, and the assessment of potential anticompetitive effects of horizontal, vertical and technology transfer agreements.<sup>155</sup>

Despite its solid legal foundation, there is room for improvement in two key areas.

- The lack of clear separation between prosecutorial and adjudication bodies within the Council may harm independence of decision-making. The law does not state clearly the degree of independence between who is in charge of the investigation inside the Council and their relationship with the Plenum that decides the cases.<sup>156</sup> Article 55, for example, affirms that the Plenum has the power to decide if an investigation is open once a complaint is received and analyzed. A level of control by the Plenum over those responsible for prosecution could harm the independence of the process and limit the checks and balances within the agency that would work to prevent undue influence by either public or private stakeholders.<sup>157</sup>
- The level of sanctions made available by the Competition Law is an area that could potentially improve. Even though it already follows best practices by defining fines based on total turnover of the undertaking for the prior year to the sanctioning, the maximum threshold set by the law is relatively low. Article 73.7 of the Competition Law limits fines for violation of antitrust rules to 5 percent of total turnover, compared to 10 percent in the EU. To punish violators and deter future infringements, fines should account for both the (i) illegal benefit enjoyed by the wrongdoer, and (ii) losses suffered by victims. Considering that several violations, particularly in the case of hardcore cartels, are carried on for several years, and that overprices can vary from 10 percent to 40 percent,<sup>158</sup> restricting the fine to 5 percent of revenues affected in each year is not expected to offer sufficient deterrence. Fines should have an immediate punitive/deterrent nature and, if effective, will indirectly promote public interest concerns such as consumer welfare, access to markets, productivity, and growth by preventing future anticompetitive behavior to take place.

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<sup>150</sup> See articles 20 and 22. The framework also provide for pre-notification consultations (art. 23). Competition Law n. 183 from 11.07.2012.

<sup>151</sup> See article 84, Competition Law n. 183 from 11.07.2012.

<sup>152</sup> See article 80, Competition Law n. 183 from 11.07.2012.

<sup>153</sup> See article 84, Competition Law n. 183 from 11.07.2012.

<sup>154</sup> See articles 58-65 provide for, among others, right to be heard and access files, protect confidential information, be represented by a lawyer, published decision with legal reasoning,

<sup>155</sup> Competition Council decisions on approving the Regulation on economic concentrations no 17 as of 30.08.2013; Regulation on establishing dominant position on the market and assessing the abuse of dominant position no 16 as of 30.08.2013; the Regulation on assessment of anticompetitive technology transfer agreements, n. 15 as of 30.08.2013, Official Gazette n. 213-215/1460 as of 27.09.2013; Regulation on assessment of horizontal agreements n. 14 of August 30, 2013. See instructions and regulations available the Competition council official website, available at <https://competition.md/tabview.php?l=en&idc=34&t=/Official-documents/Competition>,

<sup>156</sup> See article 49 and following. Competition Law n. 183 from 11.07.2012.

<sup>157</sup> Similarly, the President of the Council also holds the right to issue inspection orders to be fulfilled by council employees (dawn raids) – which is an investigative power. The Plenum is also responsible for staffing the Council. The level of influence of the Plenum over those responsible for prosecution may harm the independence of the process.

<sup>158</sup> When competing firms agree to fix prices, empirical evidence reveals that consumers pay on average 49 percent more. There is initial evidence, based on a selected number of cartels in developing economies between 1995 and 2013, showing that affected sales of cartel members can reach up to 6.4 percent of GDP. Levenstein, Suslow, and Oswald estimate that from 3.4 percent to 8.4 percent of imports in developing countries are affected by cartel agreements. See John M. Connor, *Price-Fixing Overcharges: Revised 3rd Edition* (February 24, 2014); Ivaldi et al. (2015); Levenstein, Suslow, and Oswald, *International Price-Fixing Cartels and Developing Countries: A Discussion of Effects and Policy Remedies* (National Bureau of Economic Research, 2003.)

## Resources should be channeled to the fight against the most harmful anticompetitive practices

Moldova dedicates a significant amount of resources to the Competition Council. However, enforcement numbers show a decreasing trend in recent years. More importantly, the prosecution of anticompetitive practices has been overshadowed by investigations into unfair competition and advertising. In 2017, the Council relied on a budget of MDL 19,212 thousand, almost 25 percent more than in 2015, and on 90 staff, a significant increase from the 52 people in 2014. However, the Council still struggled to retain the necessary human resources to deliver on its mandate: between 40 to 60 percent of the staff positions available to the Council have remained vacant over the years. Turnover – the rate at which employees leave a workforce and are replaced – has also been high, reaching almost 50 percent in 2017.<sup>159</sup>

However, as Table 4 summarizes, the average number of cases concluded by the Council during 2012-15 were lower than half the average number of the previous four years. Moreover, during the period 2008-14, unfair competition and advertising represented 27 percent of analyzed cases, while anticompetitive agreements – including cartels - represented only 6 percent.<sup>160</sup> On mergers, the number of cases involving concentration is significant: ranging from 2,704 in 2014 to 2,825 in 2016. However, only a fraction of these cases exceeds the thresholds established by the Competition Law for merger notification – for example, 256 in 2014.<sup>161</sup> Even though this is a significant number of mergers brought to the Competition Council's attention, the depth of analysis given to these cases is not clear. The annual reports of the Competition Council only inform about the number of cases open due to nonnotification or potential restrictions to competition but do not clearly inform about the number of mergers reviewed per year following an antitrust analysis.

On enforcement, the Council should focus on preventing and fighting the most harmful anticompetitive practices, such as hardcore cartels, rather than tackling violations that have a lesser impact on market dynamics. Considering the high level of market concentration, the presence of SOEs, state aid, and a lack of competitive neutrality, detecting, sanctioning, and deterring abuse of market power is also important in several key sectors for the Moldovan economy. Strengthening the independence of those in charge of prosecution and increasing maximum fines will further facilitate the Council's work on fighting anticompetitive practices. Another area of focus of the Competition Council, ahead of unfair competition or advertising, should be competition advocacy, discussed below.

Moreover, the Competition Council should seek alternatives to boost the effectiveness of its policy implementation. Although the number of new cases has increased due to greater *ex officio* activity since

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<sup>159</sup> The Council has approved a budget to staff up to 132 people. However due to a combination of low salaries, the high level of responsibility, and a lack of professionals with the needed expertise in the market, the Council has been unable to expand as expected. The Council is partnering with universities to promote training on competition law and economics. See Competition Council, Republic of Moldova, *Activity Report of the Competition Council* (2015); Competition Council, Republic of Moldova, *Activity Report of the Competition Council*: (2017): 71-72.

<sup>160</sup> The competition law covers both anticompetitive unilateral behavior and unfair commercial practices. Although covering both types of prohibitions is a common feature of competition laws, it is important to clearly differentiate the two. On the one hand, anticompetitive unilateral behavior has the capacity to harm market dynamics through higher prices and entry barriers. On the other hand, unfair commercial practices are characterized by the harm caused to specific businesses or consumers due to fraud, misleading practices, or violations of trade secrets and intellectual property rights. Unfair commercial practices do not necessarily impact market dynamics. This difference is particularly relevant for assessing the adequate theory of harm, the type of sanctions or remedies, and the standard of proof associated with each practice.

<sup>161</sup> Art. 22.1 “the aggregate amount of the turnover of the undertakings concerned registered for the year prior to the operation exceeds MDL 25 000 000 and there are at least two undertakings concerned in the operation which each separately register a turnover of more than MDL 10 000 000 for the year prior to the operation, on the territory of the Republic of Moldova.” See Competition Council, *Raportul privind activitatea Consiliului Concurenței pentru anul 2014* (2015); 23; and Competition Council Report: (2016): 41.

2014, the number of concluded cases per year has not followed at the same pace.<sup>162</sup> In 2017, the year with the most recent data, 36 new cases were initiated but only 25 were concluded; meanwhile, 2017 ended with 85 pending cases on advertising and 70 pending cases of anticompetitive practices.<sup>163</sup> Similarly, even though the Council has been able to considerably increase its level of sanctions in recent years – see the evolution of total fines in Table 4 – the policy could be more effective if fines had a higher deterrent effect.<sup>164</sup>

**Table 4. Number of cases finalized, and value of fines collected per year. Competition Council (2008-2017)**

Topics	Number of cases									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Anticompetitive Agreements	6	1	9	1	2	0	2	2	3	6
Abuse of dominant position	10	14	9	21	21	17	5	7	8	3
Anticompetitive actions of public authorities	2	10	4	15	22	11	1	9	4	6
Unfair competition	12	13	14	11	14	13	6	12	7	5
Advertising disputes	11	11	7	4			3			
Mergers and acquisitions	25	23	46	28	6	2	3*	5*	5*	5*
<b>Total number of cases</b>	66	72	89	80	39	43	20	35	27	25
<b>Total Fines (thousand lei)</b>	0	0	0	263.3	1,398.2	282.4	1,703.3	38,000	19,210	12,495

Source: Constructed by the author based on WTO (2015). Trade policy review report by the secretariat Republic of Moldova. WT/TPR/S/323 (values used for period 2008-14) and Competition Council. Republic of Moldova. Activity Reports of the Competition Council in 2012-2013, 2014, 2015, 2016, and 2017 (values used for period 2012-17). Note: \* number of mergers and acquisitions refers to cases open to investigate potential violation for nonnotification to the Competition Council.

These recommendations are in line with the most recent European Union Directive on Competition framework, designed to empower the competition authorities of the member states to be more effective enforcers and to ensure the proper functioning of their internal markets.<sup>165</sup> Its objective is to ensure that National Competition Authorities (NCAs) have the guarantees of independence, resources, and fining powers necessary to effectively enforce competition rules embedded in Articles 101 and 102 of the Treaty on the Functioning of the European Union (TFEU). For Moldova, this means increasing its maximum fines, ensuring a clear separation between prosecutorial and adjudication functions of the Council, and making sure the Council receives the necessary human and financial resources to fulfill its mandate. With these reforms, it will depend on the Council to effectively use its tools to identify (for example, leniency and dawn raids) and sanction for example adequate fines) illicit conduct thus deterring anticompetitive behavior and aligning Moldova with the competition policy of the European Union.

<sup>162</sup> Unnotified economic concentrations (from 0 in 2014 to 9 in 2017); the actions of the public authorities of collision of competition (from 1 in 2014 to 8 in 2017); anticompetitive agreements (from 2 in 2014 to 9 in 2017); and abuse of dominant position (from 5 in 2014 to 8 in 2017). Average times of review have also been reduced. See Competition Council, Republic of Moldova, *Activity Report of the Competition Council* (2017), 45.

<sup>163</sup> See Competition Council, Republic of Moldova, *Activity Report of the Competition Council* (2017), 9.

<sup>164</sup> In 2017, 8.3 million lei were cashed in to the state budget from different fines, double the rate of 2016 and 1.5 times more than the amount of the fines collected for the state budget during the period 2013-16. Much more could be done with adequate standards. See Competition Council, Republic of Moldova, *Activity Report of the Competition Council* (2017), 5.

<sup>165</sup> See Directive (EU) 2019/1 of the European Parliament and of the Council of 11 December 2018. Official Journal of the European Union L 11/3.

## Advocating competition

Competition advocacy has been increasingly recognized in recent years as one of the most effective and important functions of a competition agency. The basic idea is that enforcement of competition law, while vitally important, is insufficient to achieve a broad culture of competition with competitive, dynamic markets. As discussed in previous sections, many obstacles to competition are formed not by private market actors engaging in unlawful behavior but by the often-unintended effects of laws or regulatory programs that have the effect of impeding effective competition. Therefore, beyond the Competition Council, there are other institutions (line ministries, sectoral regulators), policies, and implementation gaps that need to change to increase competition in product markets.

The competition law already sets the basic foundations for competition advocacy. The competition law demands that public administration authorities send to the Competition Council for approval the drafts of legislative and normative acts which have or may have anticompetitive impact.<sup>166</sup> Similarly, the Competition Council has the mandate to prevent actions or inactions of public authorities – central and local - that could lead to competition restriction.<sup>167</sup> Finally, the legislation provides for the collaboration between the Competition Council and other regulating authorities, providing that regulating authorities should act *ex ante* in the regulated sector, while the Competition Council should act *ex post*, in order to ensure the application of antitrust rules over market behavior.<sup>168</sup> (See Box 15)

Based on its comprehensive mandate, the Competition Council has already designed a comprehensive strategy to promote advocacy in Moldova. However, greater implementation must follow. The National Competition and State Aid Program for the years 2017-20 was designed to implement the competition provisions of the National Development Strategy "Moldova 2020" for a more coherent application of the Competition Law no. 183/2012 and Law no. 139/2012 on state aid in accordance with the provisions of Chapter 10 "Competition" in Title V of the Association Agreement between Moldova and the EU.<sup>169</sup> Inspired by the Product Market Regulation methodology, the program focused on: (i) market liberalization policies; (ii) the size of the public sector in relation to the national economy; (iii) public procurement rules; and (iv) price control and regulation of different products, services, and works.<sup>170</sup>

The Competition Council has advanced its efforts in advocacy. Similarly, with the support of international donors, several market studies were conducted, for instance, pharmaceuticals, road maintenance, and public procurement. The Council has also engaged proactively with sectoral regulators to find ways of working together to tackle competition constraints, support procompetition regulatory frameworks, and reduce anticompetitive behavior. The Council has increased significantly its engagement on

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<sup>166</sup> Article 34 and article 39: "addressing to competent bodies on the incompatibility of the legislative and normative acts adopted with the competition legislation, legislation on state aid and advertising, in the limits of its competence". Competition Law n. 183 from 11.07.2012.

<sup>167</sup> Article 12, Competition Law n. 183 from 11.07.2012. Restrictive actions include: (a) limitation of undertaking's rights to procure or commercialize; (b) setting of discriminatory conditions or granting of privileges for undertaking activity, in case these are not provided for by the law; (c) setting of interdictions or restrictions which are not provided for by the law, to undertaking activity; and (d) entailing, directly or indirectly, the undertakings to associate or concentrate irrespective of the form. The competition Council can order the government entity to repeal its anticompetitive measure. If the authority does not comply, the council can take the case to the court.

<sup>168</sup> Article 34, Competition Law n. 183 from 11.07.2012.

<sup>169</sup> LEGE Nr. 169 of 20.07.2017 for the approval of the National Program for Competition and State Aid for the years 2017-20. Available at <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=371237>

<sup>170</sup> LEGE Nr. 169 of 20.07.2017 for the approval of the National Program for Competition and State Aid for the years 2017-20. Available at <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=371237>

procompetition regulation: in 2017 alone, it reviewed 89 draft legislative and normative acts – covering both competition issues and misleading advertising – most of them with proposals and recommendations for improvement.<sup>171</sup> However, as the analysis developed throughout this chapter shows, there are several restrictive policies and regulations yet to be taken on in the country. A possible way forward for the Council is to monitor the outcome of its opinions with relevant stakeholders while developing strategies on how to transform recommendations into actual reforms.

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<sup>171</sup> See Competition Council. Republic of Moldova. *Activity Report of the Competition Council in 2017*.

### **Box 15. The Powerful Role of the Competition Council as Promoter of Pro-competition Government Interventions**

The Competition Council has worked to advance both its advocacy mandate and its implementation activities. With respect to its mandate, and in compliance with the national plan of Actions for the implementation of the Moldovan – European Union Association Agreement, the Competition Council sent to the Ministry of Justice a proposal to regulate the framework governing the compulsory approval by the Competition Council of the legislative and regulatory projects that can have anticompetitive impact.

With respect to its implementation, during 2015, the Competition Council approved 68 legislative and regulatory projects, and in 63 percent of these, it proposed changes to bring drafts into compliance with the competition and the state-aid rules. In 2015, the Competition Council also analyzed 20 cases of potentially anticompetitive actions of public authorities. In nine of these cases, the Competition Council Plenum found an infringement of competition law. The following examples are a strong illustration of the positive impact that is created by the due implementation of such a mandate:

#### *Opening markets for entry and investment*

The government of Bulboaca village denied a taxi license to an applicant, Grand Express LLC, based on the grounds that at the time, a taxi-transportation service of another enterprise was already active in the village that fully fulfilled the populations' needs, and that the a passenger transportation service of another company would not be profitable. The municipality of Bulboaca refused to issue a license for the second company wishing to enter the local market of urban individual passenger transportation (taxis) based on the fact that the current provider, another private player, was already capable of fulfilling the taxi demand in the city. Granting the license for the entrant, therefore, would not be profitable, it concluded. The Plenum of the Competition Council found that the action of the Council of Bulboaca village, through the issuing of that decision, violated Art. 12 (1) a) of the Competition Law. As a consequence, the new entrant was granted the license, and "Grand Express" LLC was able to establish its taxis services in the city.

#### *Guaranteeing competition for the market*

The Competition Council received a complaint by the company Î.C.S. "Construct Arabesque" LLC regarding potentially abusive collection of payments by four companies that controlled the entry and parking of trucks in the customs control areas in the port of Chisinau.

The Chisinau Customs Office created control zones inside the premises of four players that provided logistics services near the port. Even though the cooperation agreements did not refer to the right of these companies to charge extra costs for the control services in addition to customs fees, the four companies began to charge enterprises for the right to enter the customs area. Because these four players controlled all the zones, traders did not have any option other than to pay the fees.

Even though these companies controlled the only customs areas in the city, the Customs Service did not organize any selection procedure for the concession of these services, despite its legal obligation to do so. By not organizing any selection procedures of the private partners, it created a privilege for the referred enterprises compared to other potential enterprises providing terminal services, harming competition.

The Competition Council Plenum found the agreements to be in violation of competition, recommending that the Customs Service conduct the necessary selection procedures in strict compliance with the competition rules in force, and then regulate the services. Subsequently, the Customs Authority modified the general conditions for selecting economic operators by regulating customs control areas in the Customs Code

Source: Competition Council, Republic of Moldova, *Activity Report of the Competition Council (2015)*, 20-29.

## **Policies to Promote Competition as a Driver of Productivity**

Competition can drive productivity growth, but in Moldova evidence described in this chapter points to impediments to harnessing the full power of market forces to accomplish this objective. While Moldova has established a robust institutional and legal framework in support of competition, this chapter has surfaced ideas on ways that more could be done. These can be organized under five headings: data and information; reducing policy barriers to competition associated with state enterprises; curbing anticompetitive state aid; focusing price controls; and improving the institutional framework for promoting competition as well as its enforcement.

### **Information and data: moving beyond what is known**

This chapter has presented evidence that weak competitive forces underpin Moldova's productivity performance. Nevertheless, it does not provide a comprehensive competition assessment of all Moldovan product markets, which would demand analyses at the relevant market level of several variables in addition to market concentration and structure, such as barriers to entry, capacity constraints, vertical integration, the regulatory environment, and market outcomes. A high priority for the government going forward should be conducting a comprehensive and detailed industrial census that would permit disaggregated analysis at the six-digit level and permit incorporation of firm- and product-level import and export data. Looking in detail at the effects of anticompetitive practices in distribution and other services would complement this review. Additionally, the results of the WBG-OECD Product Market Regulation Index for Moldova could shed further light on whether the regulatory environment restricts competition dynamics in Moldova.

Similarly, more firm-level information is needed on the role of tax incentives and subsidies that are provided to particular state enterprises and private players in order to fully quantify any anticompetitive effects. This chapter has shown persuasively that tax incentives and subsidies, particularly involving SOEs, may at times be anticompetitive, but that more granular quantification of their effects on market outcomes is necessary to guide policy.

### **Reducing SOE-related barriers to competition**

In addition to the measures highlighted in Chapter 1, policies that would contribute to SOE-related barriers to competition include:

- Ensure regulatory neutrality in all competitive markets
- Review legal monopolies and restrictions on entry into selected services (notably transportation services, telecommunications)
- Separate commercial and noncommercial objectives of SOEs so as to avoid compromising competitive neutrality
- Consider developing a SOE policy that includes a rationale for the creation, continuation, and cessation of SOEs based on their potential impact on markets and analysis of whether the markets can be more efficiently served by the private sector

### **Limiting price controls and other anticompetitive restrictions**

- Consider replacing margin/price controls of staple foods/pharmaceuticals with less restrictive measures, for example with vouchers for staple goods provided to vulnerable populations, allowing private players to compete for the market.
- Reassess the methodologies used to control prices and margins of fuel

- Remove restrictions to participation in markets, such as burdensome requirements to import, or to engage in wholesale and retail enterprises in various sectors (for example, pharmaceuticals and fuels)

#### **Strengthen antitrust enforcement and advocacy**

- Focus competition enforcement on the fight against the most pervasive anticompetitive practices, notably cartels that adversely affect consumer welfare and abuse of dominance, and evaluate resources allocated to merger review and unfair competition
- Increase the level of fines (for example, amend legislation to increase maximum fines from 5 percent to 10 percent of total turnover in the previous business year)
- Improve checks and balance within the Competition Council (for example, amend legislation or issue regulations to clarify the independence between prosecutorial and adjudication bodies within the Competition Council)
- Promote advocacy to embed competition principles in other government policies and regulations

#### **Streamline state aid policy implementation**

- Improve availability of public information on state aid, including on the state-aid beneficiaries – particularly in the case of SOEs
- Rationalize the use of state aid in the economy, bringing it closer to EU state-aid practice
- Align existing state aid with the state-aid regulation, including fiscal aid in FEZs
- Reinforce the use of horizontal aid schemes and reduce the use of sector specific and individual aid
- Move away from state aid provided through budget revenue waivers (for example, tax benefits) to aid provided through budget expenditures

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## Chapter 4. Tax Policy in Moldova and implications for Economic Growth

### Introduction

Tax policy influences not only revenue mobilization but also the amount of capital and labor hired by a firm (and therefore the capital intensity of production) and the share of private savings, and in turn, capital formation. The level of output is a function of employment of labor and utilization of capital stock in the economy. The tax regime as applied to income from labor and capital plays an important role in allocation of resources and thereby economic development. Moreover, tax policy influences private savings and therefore, capital formation.<sup>172</sup> The private savings include the net factor receipts and net transfers, including remittances from citizens living abroad. The flip side of higher savings though is lower levels of consumption, affecting the aggregate demand. Thus, the policy problem is choosing between the right levels of present and future consumption. Tax policy also affects the levels of government revenues and its savings that go into capital formation. Again, tax policy has a role in promoting investment through its treatment of investment income. One component of savings and investment is also foreign savings either through aid or foreign direct investment.

Against this context, this chapter analyzes the major tax regimes in Moldova and their potential impact on businesses and the country's economic growth. The tax regimes analyzed include the income taxes (both personal and corporate), value-added taxes, and excise taxes. The Moldovan tax system is examined in view of the key principles as stated in the tax code: tax neutrality, efficiency, equity, certainty, and stability. The analysis is complemented with reference to international best practices.

The findings in the chapter are that revenue performance in Moldova has been better than many countries in Eastern Europe but that some features of its tax policy do not encourage economic growth. The structure of the revenue system is skewed towards labor income compared to consumption taxes, with negative supply-side incentives as a result of the large presence of tax expenditures that are not always justifiable on economic or social grounds. High labor taxes discourage employment; excessive tax incentives to a few sectors and free economic zones lead to misallocation of resources across sectors and businesses; and lower taxes on consumption - due also to a large presence of zero-rated and VAT exemptions - affects savings, and in turn capital accumulation, adversely. For example, the number of multinational companies has increased over time and their contribution to corporate income tax revenues has increased more than proportionately, but VAT revenues lagged behind. This combination of high tax on income and low tax on consumption is bound to have a negative impact on productivity and economic growth.

Additionally, with a 12 percent CIT rate and even lower tax rates on other types of capital income, virtually the whole economy has been converted into a near-free economic zone. Giving further tax concessions to a few sectors or regions is more a source of distortions than an instrument of business promotion. Such preferential treatment creates misallocation of resources in the economy which is detrimental to productivity and growth.

While a better strategy would be to gradually phase out tax incentives and broaden the tax base, insofar as incentives are in place, the transparency of Moldova's incentive regime should be improved. This includes providing information on the opportunities and the application of the tax laws and rules to prospective investors and making all the relevant information easily accessible and available on line. Reducing or eliminating the scope of any administrative discretion in the awarding of incentives is strongly recommended. While incentives cannot be abolished completely, restructuring them with the aim of

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<sup>172</sup> Richard A. Musgrave, and Peggy B. Musgrave, "Public Finance in Theory and Practice" 5<sup>th</sup> edition, chapter 17, *Taxation Effects on Capacity Output: A Supply-Side Perspective* (1989).

enhancing their effectiveness in inducing marginal investment would imply eliminating tax holidays and replacing them with investment-linked incentives such as accelerated depreciation allowance and investment tax credit.

A complex structure of generous fiscal incentives across sectors and regions, combined with multiple rating and exemptions embedded in the VAT regime, has burdened tax administration and adversely affected the productivity of major taxes. While assessment of tax administration is beyond the scope of this chapter, some brief qualifications may shed light on the country's tax performance. VAT administration remains weak in detecting major VAT evasions and catching various fraudulent schemes which have over time become ever more sophisticated and have resulted in a higher level of revenue leakage. Risk-based auditing requires further improvement – to better target high-earning employees and voluntary compliance, including ones from large taxpayer offices.

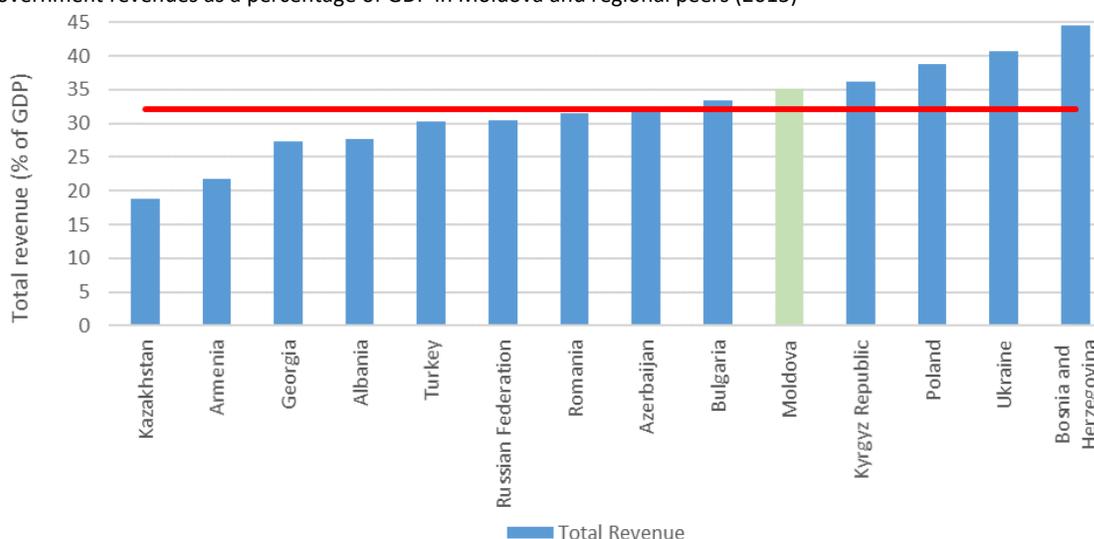
In summary, in order to increase productivity of factor inputs and to promote economic growth and exports, Moldova needs to restructure the tax mix, raise the productivity of major taxes, streamline incentives and reduce tax expenditures with a view towards balancing the collection of adequate tax revenues and reducing the undue burden on the business environment. Such a balance can only be achieved by reviewing the tax regimes as a complete package.

### Revenue Performance in Moldova: Emerging Trends

Moldova collects more revenues but also spends more than similar regional peer countries. The revenue to GDP ratio in Moldova peaked at 41.72 percent in 2007 after which it has been gradually declining and stood at 35.5 percent in 2017 (Figure 67). The tax revenues show a similar trend peaking at 33.58 percent in 2007 and declining to 31.4 percent in 2016 and to approximately 32 percent in 2017. About 9-10 percent of the tax revenues comes from social security and health insurance contributions.

**Figure 67. Moldova collects more revenue than regional peer countries**

Government revenues as a percentage of GDP in Moldova and regional peers (2015)



Source: IMF revenue database 2018 and World Bank Staff calculations.

Note: The red line shows the average total revenues to GDP ratio for the EEC nations.

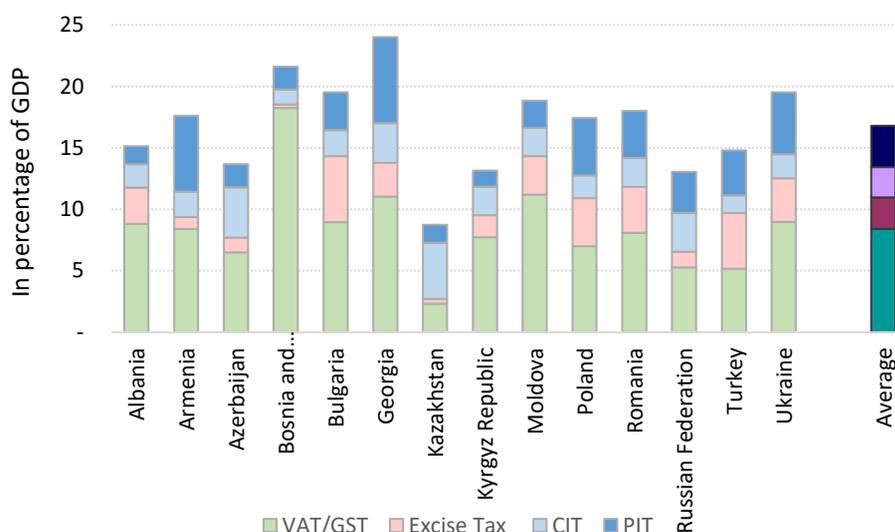
Looking at its composition, revenues from taxes and fees alone peaked at about 24 percent of GDP in 2006 and 2007 and then declined to 21.5 percent in 2012-16. It has shown a rising trend since 2016 and stood at about 23 percent in 2017. The combined sum of Corporate Income Tax (CIT) and Personal Income

Tax (PIT) however has been generally below 5 percent of GDP and the overall direct taxes including insurance payments have amounted to about 15 percent of GDP.

As in most countries in Eastern Europe, the revenue structure was skewed in the past toward taxes on goods and services that reached 19 percent of GDP in 2007 and 2008 but now account only for about 15-16 percent (see Figure 68). Out of this, excises contributed 3.5 percent of GDP while the share of trade taxes has declined from 2 percent in 2006 to 1 percent in 2015 and 2016. The Value Added Tax (VAT) revenues stood at 14.5 percent in 2008 dropping to 11.0 percent in 2016 and 2017. Also, more than two-thirds of the total VAT collections came from VAT on imports while domestic VAT was usually below 4 percent of GDP. It is not surprising therefore that income taxes, including social security and health insurance payments, have gradually overtaken consumption taxes as a share of GDP.

**Figure 68. The revenue structure in Moldova is similar to the ones observed in other regional peers**

Tax revenues from VAT/GST, Excises, CIT and PIT in in Moldova and regional peers (2015)



Source: IMF Revenue Database 2018; Moldova STC; and World Bank Staff calculations.

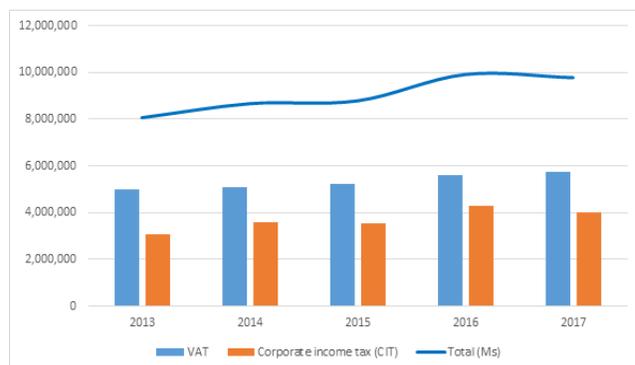
The share of revenue from small- medium- and large-size enterprises remained constant until 2017 when corporate income revenue from medium-size enterprises deteriorated despite an increase in the number of firms (Figure 69).<sup>173</sup> The small businesses<sup>174</sup> account for a stable share of the total revenue: about 3 percent. As predicted, large firms contribute the biggest share in collection, ranging from 50 to 55 percent.

<sup>173</sup> In fact, the number of medium businesses that filed income tax returns has increased steadily, from almost 48 thousand to 64 thousand in 2013 and 2017 respectively.

<sup>174</sup> The size of businesses is defined uniquely in each country based on turnover and the data on different size industries provided by STC.

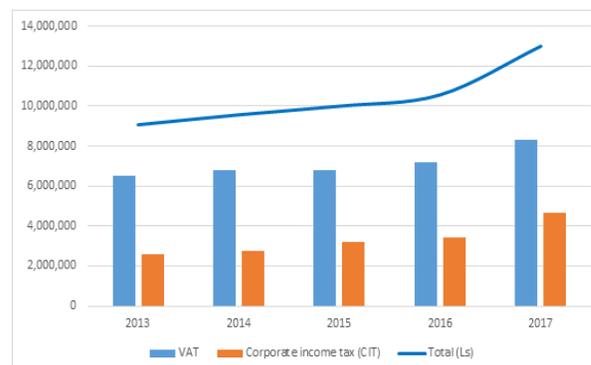
**Figure 69. Revenue from corporate income tax among medium size firms have recently declined...**

Tax collection among medium firms (2013-2017)



**Figure 70. While large size firms are now contributing to a large share of CIT revenue.**

Tax collection among large firms (2013-2017)



Source: World Bank Staff calculations based on STC data and estimates.

Note: The tax collection is presented in real terms (the base year of 2000).

Yet also among large companies, while the corporate income tax revenues have increased more than proportionately compared to the observed increase in the number of firms (Figure 70), revenue from VAT has lagged behind (Table 5). As will be illustrated subsequently, excessive tax expenditures in VAT have affected revenue collections in most sectors and from all categories of firms.

**Table 5. Increase in number of Foreign/Multinationals firms and VAT/CIT Collections**

Year	2014	2015	2016	2017
Number of foreign/ multinationals firms	4519	4753	4988	5212
Rate at which the number of firms have grown	9%	5%	5%	4%
VAT	3%	-2%	7%	3%
Corporate income tax (CIT)	4%	7%	16%	17%

Source: World Bank Staff calculations based on STS data.

### Revenue performance: buoyancy and elasticity of the tax system

Generally, as the GDP grows, the tax base and consequently the tax revenues should be growing proportionately on their own without the need for making any changes in the tax base or tax rate. To inform the relationship between economic development highlighted above and the revenue outcomes, the study analyzed the tax buoyancies at the aggregate levels.

Tax buoyancy is an indicator that measures efficiency and responsiveness of revenue mobilization in response to growth in the overall economic activity or national income inclusive of any changes in the tax system. A tax is buoyant if the tax revenues increase at least proportionately or possibly more than proportionately in response to a rise in national income or output which is the tax base. The overall buoyancy of a tax system is measured by the percentage change in total tax revenues with respect to the percentage change in the respective tax base or broadly the percentage change in GDP (see Box 16 for the technical explanation related to its calculation).

**Box 16. The Calculation of Buoyancy.**

The buoyancy  $\beta$  is expressed as:

$$\beta = \% \Delta R / \% \Delta GDP \quad (1)$$

where R is revenue and GDP is the base or gross domestic product. This formula can be applied to other individual taxes as well. The overall tax buoyancy can therefore be decomposed into individual tax buoyancies for analyzing performance of individual tax heads. While this formula gives year to year buoyancy, to derive the long-term buoyancy, the Ordinary Least Square (OLS) econometric method applied to time series of tax revenues and GDP needs to be used:

$$\log R = \alpha + \beta \log GDP + \varepsilon \quad (2)$$

The parameter  $\alpha$  is a constant term,  $\beta$  is the long-term buoyancy and  $\varepsilon$  is the stochastic or error term. For a meaningful result using the OLS method, a time series data for tax revenues and GDP is required over a period of at least 10 years. While long-term revenue and GDP data were available for overall revenues for the economy for the years 2000-17, sector-wise data were available for only the limited period of 2008-14. Nevertheless, econometric analysis was done knowing that the results may not be that robust.

Source: World Bank Staff.

Ideally, estimates of tax elasticities should be computed as well since a good tax system should be able to capture the growth in the base even when the tax rate does not change. That way, the tax system would be able to experience the same growth rate and elements of progressivity as the GDP. In the case of Moldova, this was not feasible due to lack of data related to the revenue impact of discretionary changes.

**Table 6. Responsiveness of revenues to GDP growth (Buoyancy by tax head) 2000-2017**

BUOYANCY	2000-2017
Total Revenue	1.12
CIT	1.07
PIT	1.25
VAT	1.42
Excises	0.99
International trade	0.66
Social insurance Tax	1.18
Health Insurance Tax	2.60

Source: World Bank Staff calculations based on Moldova STC data. The actual responsiveness of the tax structure to economic activity or the buoyancy was estimated using tax revenue data from the Tax Committee (TC) for 2000-17.

Looking by type of taxes, buoyancy appears to be in line with GDP growth, with few exceptions (Table 6). This includes the health insurance tax buoyancy which is quite high compared to other economic sectors and different from what may be usually seen in other countries. The buoyancy of excises is slightly less than 1, and this could be because of unit tax rates in some cases which are not automatically inflation-adjusted. International tax buoyancy is also low at 0.66 and this reflects the fact that international taxes are declining in importance as source of revenues in accordance with the WTO provisions.

**Table 7. Responsiveness of revenues to GDP growth by sectors (Buoyancy by tax head) 2008-2014**

BUOYANCY	2008-2014
Agriculture, forestry & fisheries	-0.35
Mining and quarrying	-0.11
Manufacturing	0.34
Energy, Gas and Steam	-1.18
Construction	0.76
Wholesale and retail	1.06
Transport & Communication	1.19
Hotel and food services	1.63
Financial and insurance	-0.06
Real Estate	1.10
Public Admin., defense etc.	-0.95
Education	2.20
Health & social work	0.84

Source: World Bank Staff calculations based on Moldova STC data

Looking at the buoyancy at the sector level based on available data (Table 7), a number of sectors, including agriculture, mining, energy and gas, construction, and the financial sector, are not contributing to tax revenues commensurate with their share in the economy. This suggests the need for scrutiny of their taxation regime and a review of their existing exemptions. Agriculture is taxed at 7 percent under the personal income taxation while the normal tax rate is 12 percent. The sector also benefits from VAT exemption of agricultural equipment. With a lower statutory tax rate, further incentives to the sector are hardly justified. Other under-taxed sectors appear to be mining and energy/gas, which have negative buoyancy. Similarly, compared to expectations, manufacturing has a low buoyancy of 0.34. Finally, the aggregation of public administration, defense, and social security may be the reason behind the negative results. However, this aggregation is misleading because social security should be a separate category on its own and should generally exhibit a positive buoyancy.

### **The Taxation of Income from Labor and its Impact on Employment**

The Moldovan tax system taxes its residents and citizens on their global income. Taxable income is gross earnings from all sources, whether earned at home or abroad, including income from running a business, conducting professional activities, payment for labor and services, fringe benefits provided by the employer, rents, capital gains, interest income, and royalty payments, except for allowable deductions and exemptions. Taxation of global income of Moldovan citizens and residents, however, raises the question of whether the tax administration is capable of implementing it completely if it is unable to track down income earned abroad.

The tax law was recently amended by the introduction of a flat tax of 12 percent introduced in place of a two-bracket tax structure. The flat rate for personal income tax has been introduced for individuals, individual entrepreneurs, and family doctors practicing independently. Separate provisions exist for special categories of taxpayers, such as income tax due by taxi drivers and for salary income below Lei 10,000, which is set at MDL 500 per month<sup>175</sup>.

In addition to the PIT, workers are subject to Social Security and Health Insurance Contributions (SSC), which cover benefits such as pensions, unemployment, maternity, disability, and sickness indemnities

<sup>175</sup> PriceWaterhouseCooper brief on tax alert, September 2018.

(Table 8). The Moldovan legislation on social security is unclear with respect to salary income received from non-Moldovan employers.

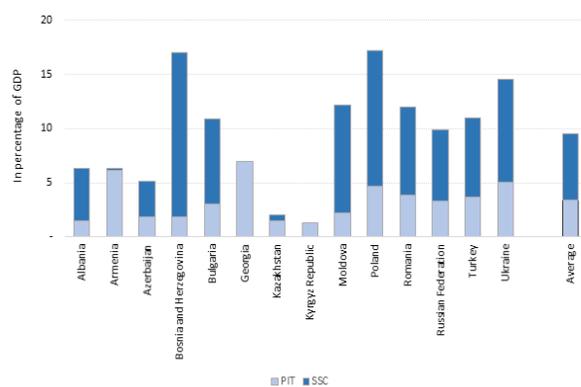
**Table 8. Social security and health insurance rates in Moldova**

Type of insurance	Paid by employer	Paid by employee	Total
Social Security	23%	6%	29%
Health Insurance	4.5%	4.5%	9%
Total	27.5%	10.5%	38%

Compared to regional peers, Moldova ranks quite high in terms of the combined impact of the personal income tax (PIT) and SSCs, which suggests that there are higher labor costs in Moldova. Labor taxes create a “tax wedge” between labor costs to the employer and the worker’s take-home pay, thereby reducing both employment and economic growth (Figure 71). The higher the marginal effective tax rate, the lower the incentives for the employee to look for work. In the face of higher labor costs, due to their share of the payroll taxes, employers can reduce employment, reduce working time, reduce the wages of employees, underreport the formal wage, or go informal. A recent tax review for the Latvia tax system by the World Bank Group (2017), for example, found that taxes on labor - personal income taxes and social security contributions - directly reduce labor demand by driving up labor costs for employers and reduce labor supply by lowering after-tax wages.

**Figure 71. Moldova labor tax wedge is high compared to regional peers**

PIT and SSC in Moldova and regional peers (2015)



Source: IMF revenue database 2018 and World Bank Staff calculations.

One dampening effect on employment creation in Moldova is the substantial amount of wage taxes levied on employers.<sup>176</sup> The employers bear a sizeable part of social security and health insurance tax for every worker they hire. The social security taxes were set at 6 percent on employees and 23 percent on employers, while the health insurance tax amounts to 9 percent. The combined burden of social security and health insurance on employers of 27.5 (23 + 4.5 percent) may have led employers to negotiate the wages and other payment to employees in order to shift some of this burden to them, leading to informality and the practice of “salary in envelope.” Following the recent tax reform, there has also been a reduction in the rates of social security contributions by the employers. The social security rates have

<sup>176</sup> Chapter 1 of this paper also examines this issue in detail and concludes that labor makes minimal or even negative contributions to economic growth.

been reduced from 23 percent to 18 percent for employers in the private sector, higher education, and medical institutions.

The recent amendment changing PIT from a two-bracket progressive tax structure to a flat tax could help enhance formal sector employment for those earning more than the personal allowance, which has also been increased, and could affect economic growth in a positive way. Another advantage of a flat rate tax system is that it reduces compliance and administrative costs. While the introduction of a lower flat PIT rate is likely to lead to revenue loss and compromise equity, Moldova can learn from the experience of other countries in adopting additional mitigating measures to protect the base and the total tax collection.

The introduction of a flat PIT rate at 12 percent and the reduction in the social security tax on employers from 23 to 18 percent should be viewed from the overall fiscal perspective. While these are positive steps towards employment generation and economic growth, they tend to depress the total revenue collection. It is also worth noting that the social contributions -- from employers, employees, and individual entrepreneurs -- are tax free. There is no tax when contributions are made to the social security fund and when distributions are made after retirement. At the same time, the social security tax is the second largest source of tax revenues after VAT. The social security contribution is thus a tax-free savings and provides an important social security safety net. Keeping it tax-exempt at both ends when making contributions and making payments, however, is not the correct approach and is not in accordance with international best practices. All income should be taxed and therefore social security should be taxed either at the stage of making contributions or when making distributions. This becomes more relevant after introduction of a flat rate personal income tax which will result in further decline in PIT revenues.

The government will thus have to find alternate revenue sources to make up for this revenue loss and to increase progressivity. In the case of Moldova, the wealth tax represents a good opportunity to restore some progressivity in the tax system and to mobilize revenue (Box 17).

**Box 17. Using the Wealth Tax to Restore Progressivity and Mobilize Revenue**

A new wealth tax, which went into effect on July 1, 2016, was imposed on residential immovable property with an assessed value exceeding MDL 1.5 million, and the total area in excess of 120 m<sup>2</sup>. The assessed value of the residential immovable property is determined by the territorial cadastral authorities and the tax rate is 0.8 percent of the assessed property value. The wealth tax is supposed to offset the weakening of progressivity in the personal income taxes following the replacement of a two-rate tax structure by a flat rate, and at the same time to help increase tax revenues.

The effectiveness of the wealth tax is considerably weakened by the double conditions of first, exceeding the value threshold and then applying the tax only when the high value property has a surface area larger than 120 m<sup>2</sup>. This provides an opportunity for tax avoidance, and it is also unfair from the horizontal fairness perspective. For instance, a modest apartment with a small surface area in the center of town may be worth millions but it would not be legally subject to the wealth tax.

Also, the efficacy of the net wealth tax on immovable property depends solely upon a modern system of the cadaster and property valuation that are not easy to calculate and are yet to happen in Moldova. It is now a government priority in Moldova to have all properties valued through mass property valuation to ensure equity of property taxation. For conducting revaluation and first valuation of properties, an overall property tax policy (PTP) would be desirable. This is a step in the right direction that will not only help improve property taxation but will also strengthen the wealth tax implementation.

Source: World Bank Staff

Furthermore, the structure of the revenue system is still skewed towards labor income compared to consumption taxes which results in negative supply side incentives. This situation is also driven by the large presence of tax expenditures, such as zero-rated and VAT exemptions, which are not always

justifiable on economic or social grounds and tend to favor selected segments of the population or businesses. Yet reducing the burden of labor taxes requires finding alternative sources of revenue, such as reducing tax expenditures, improving tax compliance, and enhancing both the policy and administration of the wealth tax, as noted above.

### The taxation of Income from Capital and its role on Investments

Taxation of capital income includes company profits, dividends, capital gains, and interest income. This tax clearly has a major impact on the investment and business climate in the country and thus on economic growth.

The tax rate for companies is 12 percent, among the lowest in the region, with only Kyrgyzstan and Uzbekistan having lower rates,<sup>177</sup> and further includes lower rates for certain categories. With such a low tax rate, it is not surprising that the CIT revenue share relative to GDP in Moldova is one of the lowest in the world. The CIT revenue is currently at about 2.5 percent of GDP, lower than the one observed in similar developing and transition economies. In addition, Moldova offers a special provision for taxation of small- and medium-size businesses. The income tax rate for this category of taxpayers<sup>178</sup> amounts to 3 percent of income. This is a positive measure because this sector contributes significantly to the GDP and to employment in the economy.<sup>179</sup>

Table 9 puts Moldovan tax rates, both on labor and corporate income, in perspective. It shows that both types of incomes are taxed lightly as compared to similar economies in the region.

**Table 9: PIT and CIT Rates in Select Eastern European Countries, the Russian Federation and the EU**

Country	Highest PIT Rate	CIT Rate
Armenia	20	20
Albania	23	15
Belarus	13	18
Bulgaria	10	10
Czech Republic	22	19
Georgia	20	15
Kyrgyzstan	10	10
Moldova	12	12
Poland	32	19
Romania	10	16
Russian Federation	13	20
Ukraine	18	18
Uzbekistan	23	7.5
European Union (Average)	38.6	22

Source: KPMG tax tables 2018

The government has recently updated the loss carry-forward provisions. That would extend the period from three calendar years to five years—which is in line with international practices. It is worth noting that giving indefinite loss carry-forward may send the wrong signal to some taxpayers whereas having an excessively short period for recovering losses may not be adequate for many genuine businesses. The MOF has taken a forward-looking step to adjust such provisions to ensure a good balance between

<sup>177</sup> Source: KPMG's Corporate Tax Survey: <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>.

<sup>178</sup> It includes businesses that are not registered as VAT payers except for peasant households (farmers) and individual entrepreneurs having income activities between MDL 100,000 and up to MDL 600,000 come under this category.

<sup>179</sup> While the share of small and informal sector is about 10-20 percent of GDP in developed countries, it could be as high as 50 percent in low- and middle-income countries.

efficiency (inducing the more risk-taking investments) and to plug-up any loopholes allowing tax avoidance. Moreover, other types of capital income, including dividends, interest income, and capital gains, are taxed at even lower rates than the corporate income tax rate of 12 percent. Concerning dividends, the legal entity paying dividends is obliged to pay 12 percent as a profits tax, but this payment can be credited from any taxes applied on the taxpayer for receiving dividends. If tax credits exceed the amount of income tax payable in that tax year, such excess will be reimbursed to the taxpayer.<sup>180</sup> Interest income is to be included in gross or aggregate income. Following the recent tax law amendment, the withholding tax rate applied to interest paid to resident individuals is at 12 percent, lower than the 15 percent in the existing code. Interest income on deposits made in Moldova are tax exempt. Finally, following a recent amendment in tax law, the amount of capital gains for tax purposes has been reduced to 20 percent of the difference between the sale proceeds and the asset basis value. The taxpayer, both an individual and a corporation, is allowed to deduct capital losses only within the limits of the capital gains. However, capital losses that are not allowed for deductions in the taxable year are treated as capital losses in the next year. Under the amended law, therefore, the capital gains will be taxed even more lightly.

The Moldova Tax code does not have any special provisions for taxation of foreign companies or multinationals doing business in the country, and no reference is available to the kind of transfer-pricing rules Moldova follows that negatively impact the business environment. Taxation of multinationals and transfer pricing is becoming an important issue globally in the context of base erosion and profits shifting (BEPS) increasingly being adopted by both foreign and domestic companies. The country may therefore consider adopting and following the OECD guidelines on transfer pricing and the recent 15 point action plan on BEPS in this regard.<sup>181</sup> Also, the State Tax Service (STS) does not have any separate unit of skilled and trained personnel to manage transfer-pricing issues, and this may be the right time to establish such a unit and provide it with proper training.

With light taxation of capital income and limited provision of taxation on foreign companies, the tax bases should be broadened. Because the corporate income tax rate is one of the lowest in the region and other types of capital income are taxed even more lightly, the tax base should be broadened by rationalizing the multifarious tax exemptions and incentives available to certain sectors and regions. Such preferential treatment to a few sectors or in some regions is also creating a misallocation of resources in the economy which is clearly detrimental to growth (see also the following section).

Finally, Moldova follows a dual-income tax model where individual income from labor is taxed more heavily in comparison to capital income, which is taxed lightly. Labor, being less mobile than capital, can absorb a higher tax burden. However, the difference between the impact of taxation on labor and capital is substantial. The capital income is taxed in a range of from 6 percent withholding on dividends to 12 percent for some forms of interest income. Labor on the other hand is now taxed at a flat rate of 12 percent, but there is also a steep social security and health insurance tax on labor: 18 and 4.5 percent, respectively, paid by the employer, and 6 and 4.5 percent, respectively, paid by the employee. This shows that labor is taxed at a much higher rate and that the employers have to spend 22.5 percent over and above the wages paid to the employee. An employer would clearly try to substitute capital for labor in his business, creating a distortion in the choice of inputs. Clearly, this is likely to have an adverse impact on employment creation. In addition, the present system, with different tax rates for labor on the one hand

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<sup>180</sup> When paying dividends, the legal entity is obliged to withhold 6 percent as tax on such payments.

<sup>181</sup> BEPS Actions were developed in the context of the OECD/G20 BEPS Project. The 15 actions published in October 2015 aim to equip governments with domestic and international instruments to address tax avoidance, ensuring that profits are taxed where economic activities generating the profits are performed and where value is created.

and business and capital income on the other, creates arbitrage opportunities that erode horizontal equity.

### **Business income tax expenditures- the role of incentives for business promotion<sup>182</sup>**

While estimates for overall business income tax expenditures are not available, in contrast to detailed information available for VAT, the tax expenditures related to the corporate income tax account appear to be about 2 percent of total foregone revenue for 2015 and to be more generous for large size firms. Based on the comparative data made available by the STC for different size businesses, tax expenditures for income taxes as a percentage of total direct taxes collected during 2013-17 are low for small firms and larger for foreign/multinationals, followed by large and medium firms. The total tax expenditures from income taxes has been growing over the years and jumped during 2016 and 2017 (Table 10).

Firm size	2013	2014	2015	2016	2017
-small firms	0.07	0.07	0.07	1.29	0.35
-medium firms	0.90	1.33	0.60	4.64	2.87
-large firms	0.20	0.54	0.77	5.61	4.25
-foreign/multinationals	0.76	0.85	0.76	6.73	4.36
<b>Total</b>	<b>1.95</b>	<b>2.79</b>	<b>2.20</b>	<b>18.28</b>	<b>11.82</b>

Tax expenditures include sectors such as healthcare, nonprofit institutions, charitable and political donations, and activities for attracting business investment, including the Free Economic Zone. Also, the corporate income tax system includes reduced income tax rates for farmers at 7 percent instead of at the normal 12 percent rate. These are also the common targets of incentives in many other countries.

Moreover, Moldova offers a range of business incentives which provides for a reduction in business income taxation. All companies that expand their workforce benefit from a reduction in the taxable income equal to the average annual salary multiplied by the number of new employees hired each year. Also, expenses related to transportation, food, and training of employees can be deducted based on specified norms. Companies that invest in energy efficiency measures get the benefit of 30 percent state cofinancing of equipment costs and state guarantees on related loans. Banks issuing loans with a duration of over two years pay only 6 percent CIT on the profits from those loans, while those issuing loans of over three years pay no CIT at all. Moreover, Moldova provides for a tax holiday for businesses that invest above a certain level - as currently foreseen in Moldova. Low tax rates on capital combined with excessive tax incentives are bound to cause further misallocation of resources across sectors and regions, which is likely to adversely affect overall economic growth in the long run.

As discussed in Chapter 2, tax incentives rank only fourth out of six investment climate characteristics and do not seem to matter in attracting foreign investments. Tax incentives rank lower than transparency in government rules, investment protection guarantees, and ease of establishing a business. Only one in five investors consider investment incentives as a factor in decision making. From an FDI promotion perspective, investment decisions are driven largely by the motive to save costs and tend to be highly

<sup>182</sup> This section, as well as the discussion concerning VAT tax expenditures, draws from World Bank 2017.

sensitive to factors that might raise the costs of operations. International best practices on incentive design also suggest that incentives should be linked to clearly stated policy objectives and should be focused on those investors who are likely to be the most responsive based on their motivation and a cost-benefit analysis.

Other incentives appear hardly effective or do not have a clear rationale. For example, the reduction in taxes for businesses that increase the number of their employees would not be a major consideration for hiring additional workers. In all likelihood, this measure rewards businesses that would have hired another worker anyway. It only results in a net loss for the government and can also distort the behavior of employers. Similarly, the rationale for exempting the income of banks and microlending institutions for loans and credits for terms exceeding three years is unclear. It is also ineffective because it does not offer any incentives for the banks to pass the tax savings on to consumers. Such measures are also difficult to administer. In addition, providing a tax holiday for businesses that invest above a certain level has its own problems. Not only is the measurement of level of investment complicated, but this type of incentive is totally opaque and cuts off the taxpayer from the tax system and makes it difficult to administer such businesses. A better strategy would be to offer tax credits instead of outright exemptions so that taxpayers would be obliged to produce a tax return in order to obtain the tax reduction. This in turn increases the ability of the tax administration to audit and enforce the conditions that the taxpayer is expected to meet.

From the research of more than two decades, it is now well-established that tax incentives in general are not cost-effective instruments. In particular, outright tax exemptions or tax holidays are more or less blunt and opaque instruments in which there is no direct linkage between incentives and investments and there is no way to evaluate the amount of revenues lost.<sup>183</sup> As a result, OECD countries currently prefer to use investment tax credits or accelerated depreciation, both of which are well targeted to investment. The international experience of developing countries also shows that tax incentives and tax holidays in particular, do not have a significant impact on the flow of investment into the economy. Of course, availability of investment incentives is considered to be something handy but not the most important factor on which investors base their investment decisions. On the other hand, revenue loss is certain and substantial.

Experience also shows that much of the incentive is captured by investors who do not need it and would invest anyway. It becomes a windfall gain to the investor and a straight revenue loss to the government. Tax holidays are also difficult to control because they encourage transfer-pricing within a company or corporate group to shift profits to the tax-free business and costs to the taxable ones. Other forms of tax incentives such as lower or preferential tax rates or capital recovery-related measures are also problematic (Box 18).

Countries in Central and Eastern Europe maintain a variety of incentives. This is primarily due to tax competition among the neighbors or to the “demonstration effect”, whereby a country believes it has to offer incentives because neighboring countries do it. Yet studies show that other factors, such as economic and political stability, a well administered and stable tax system with moderate tax rates, adequate infrastructure – both physical and social - an untapped but trainable labor force, and the

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<sup>183</sup> (i) Howell H. Zee, Janet G. Stotsky, and Eduardo Ley; “Tax Incentives for Business Investment: A Primer for policy makers in Developing Countries,” *World Development* Vol. 30, No. 9 (2002): 1497-1516; (ii) David Holland and Richard J. Vann, “Income Tax Incentives for Investment” *Tax Law Design and Drafting* Vol. 2, IMF, (1998); (iii) Bruce Bolnick, “Effectiveness and Economic Impact of Tax Incentives in the SADC Region” (*SADC Tax Subcommittee Technical Report* (SADC Trade, Industry, Finance and Investment Directorate, 2004); (iv) Reint Gropp and Kristina Kostial, “The Disappearing Tax base: Is Foreign Direct Investment (FDI) Eroding Corporate Income Taxes?” (IMF working paper WP/00/173, Fiscal Affairs Department, 2000); (v) Peter Byrne, “Tax Incentives for FDI in Seven Latin American Countries” (IADB (Regional Integration Department, 2002).

existence of natural resources, are more powerful determinants. These findings have been further validated by a recent study (2015) commissioned by the G20 countries which conclude that factors other than incentives are more important and that targeted incentives are more effective.<sup>184</sup>

To summarize, Moldova's tax system, with one of the lowest CIT rates in the region at 12 percent, is clearly quite competitive. Income from dividends, interest, and capital gains are taxed at even more concessional rates. With that kind of tax structure, virtually the whole economy has been converted into a near-free economic zone. Giving further tax concessions to a few sectors or regions is more a source of distortions in the economy than an instrument of business promotion. A better strategy would be to gradually phase-out the tax incentives, broaden the tax base and use the additional tax revenues for improving the infrastructure and the regulatory environment in the country. That will be a major step in improving the business environment in the country. The government is aware of the unintended economic costs due to taxes – induced distortion in addition to the fiscal cost in terms of revenue foregone. It has begun the process of reviewing and restructuring the existing incentives structure – some have been dropped (for example, those granted to the banking sector).

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<sup>184</sup> At the request of G20 Development Working Group, a report was prepared on “Options for Low Income Countries’ Effective and Efficient Use of Tax Incentives for Investment” by the staffs of the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), the United Nations, and the World Bank in October 2015.

**Box 18. Tax Incentives in Practice**

Investment incentives have typically been granted in the form of tax holidays and exempting certain firms from paying both import duties and corporate income taxes. These types of concessions are not only difficult to administer but are also nontransparent.

**Tax Holidays:** A study of tax holidays offered by the Eastern Caribbean Currency Union (ECCU) has been made using the marginal effective tax rate (METR) approach. By comparing METRs for cases with and without a tax holiday, it was found that tax holidays cause a dramatic reduction in METRs.

**Low Statutory Tax Rate:** Lowering the statutory tax rate is the least distortionary form of investment incentive. It applies uniformly to all business activities without biasing the allocation of capital, the choice of production technology, or the form of financing and lowers METR for all businesses. This measure averts the problem of giving new investors an unfair advantage over existing producers. The main disadvantages are that the adverse impact on revenue decreases and that the tax relief accrues to all businesses, whether or not they are undertaking new investments.

**Preferential Tax Rates:** These are tax-rate reductions that apply to designated sectors, such as manufacturing or agriculture or to activities with particular characteristics. For qualifying enterprises, this benefit affects the METR in exactly the same way as a reduction in the basic tax rate. The revenue cost is lower, though, because the set of beneficiaries is restricted. Preferential tax rates, though, open the door for aggressive tax planning by companies engaged in multiple businesses. Furthermore, the greatest tax relief goes to the most profitable activities - exactly the ones that least need a special incentive. Thus, a large portion of the tax benefit is likely to be redundant. Preferential tax rates are more distortionary than overall rate reductions because they bias investment incentives. Resources are attracted to projects in the favored sector even when they have a low rate of return. This may reduce overall productivity of the economy.

**Capital Recovery Incentives--Accelerated Depreciation and Initial Capital Allowances:** The true pattern and rate of depreciation is not generally known, so any designated depreciation schedule is somewhat arbitrary. The most common form is straight-line (SL) depreciation over a plausible number of years for each class of assets. Hussey and Lubick (1996) propose the declining balance method (DBM) as the standard in their model tax code, at annual rates ranging from 5–25 percent. A write-off faster than the DBM can be regarded as an incentive, although a moderate one, because it affects only the timing of cost-recovery and not the amount.

Initial capital allowances (ICAs) are special capital write-offs that enhance cost-recovery at the start of a project. The ICA is a percentage of the asset cost that can be written off in the first year or the first few years. In particular, an initial allowance of 100 percent - full expensing - can reduce the METR to zero for an equity-financed investment, and less than zero for a debt-financed project, if interest payments are deductible. Capital recovery incentives can cause serious problems if companies abuse the incentives through sham sale and repurchase of assets, or channeling asset purchases through qualifying companies on behalf of nonqualifying partners.

These incentives however cause lower revenue loss and can be better targeted to investments.

*Source:* World Bank Staff

Meanwhile, so long as the incentives are in place, the transparency of Moldova's incentive regime should be improved by taking the following measures.

- (1) Make reliable information available on the opportunities and the application of the tax laws and rules to prospective investors; make all the relevant information available on line.
- (2) Standardize and make consistent the interpretation of the tax provisions by the various authorities involved.
- (3) Maintain a database of all the investment incentives granted to firms through different measures and mechanisms and publicize it.

- (4) Provide automatic entitlement to incentives and clear timeframes for decisions taken at the discretion of a government body and provision of exhaustive justifications for withholding of an incentive.
- (5) Eliminate the scope of any administrative discretion in the awarding of incentives.
- (6) Do away with features such as tax holidays and replace them with investment-linked incentives such as accelerated depreciation allowances and investment tax credit.
- (7) Fill the need for more nonfiscal incentives, including concessional loans, and simplification of administrative procedures for reporting and obtaining of licenses.
- (8) Correct discrepancies, fill gaps in the legislation in consultation with entrepreneurs, and make the provisions of laws and regulations governing taxation, customs procedures, land use, and so forth, more specific.
- (9) Conduct a cost-effectiveness assessment of incentives in the medium-to-long-run. Such an exercise should involve calculating the public expenditures on the incentive and assessing these costs in terms of investments attracted, jobs created, exports generated, and spillovers achieved in terms of research and innovation.

### **The Taxation of Consumption and its Impact on Savings**

The Moldova basic VAT structure is generally sound. It is characterized however by three tax rates. The multiple rates reduces the efficiency of administration and compliance due to the possibility of misclassification of goods and services, whether on purpose or due to genuine mistake.

The three VAT rates are: 0 percent (primarily on exports); 20 percent standard rate; and a reduced rate of 8 percent. The latter is applicable on a number of goods, including primarily on bread and bakery products, milk and dairy products, certain categories of medicines, and natural and liquefied gas. As a result of the recent tax amendment, a fourth rate has been introduced at 10 percent applicable to accommodation and catering services.

Importantly Moldova has a long list of VAT exemptions and VAT zero-rated goods<sup>185</sup> which has strongly narrowed the tax base. Typically, a VAT should have a broad base and low tax rates so as to lower the cost of economic inefficiency caused by the tax. Only exports should be zero-rated and only a few goods and services should be exempt. Preferential tax treatment, through zero-rating and exemptions, skews the

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<sup>185</sup> The long list of exempt items has more than twenty-five items and includes goods and services such as: food for children; state property bought as a result of privatization; preschool institutions; facilities for social, cultural, and housing purposes, as well as roads, electrical lines and substations, gas supply networks; technical expertise, exploration, construction and rehabilitation works and so forth; goods and services of education institutions related to instruction and educational process; services for training children and teenagers; services for supporting children in preschool institutions; services for supporting ill and elderly persons; medical services and medicine raw material; prosthetic and orthopedic appliances and medical equipment; goods produced by university and school canteens; financial services; services related to gambling provided by entrepreneurs in gambling businesses; burial and incineration of human and animal bodies; accommodation in dormitories; utility services for the general public; passenger transportation services; books and periodicals; services delivered by agricultural cooperatives; and cars and other motor vehicles equipment. While some of these are standard exempt services (financial, educational, and medical), most of the remaining goods/services are not (electric power imported and supplied through distribution networks, cars and other motor vehicles). Clearly, this long list needs to be scrutinized carefully and curtailed. The main goods and services that are zero-rated include exports, international passenger and cargo transportation, electric power, thermal energy and hot water for public housing; imports and deliveries of goods/services for use of diplomatic missions and for technical assistance projects, investment support projects; goods and services delivered within the free economic zones and those delivered by free economic zones residents to each other; services of light-industry enterprises from the list approved by the Ministry of Economy; and goods supplied to duty-free shops. While exports and services related to international transport are in the standard zero-rated category, some others need to be brought under VAT.

consumption and production decisions toward commodities subject to lower tax rates. A broad-based VAT also deters tax avoidance and encourages firms to be a part of the formal economy. VAT exemptions, on the other hand, remove some sectors of the economy wholesale from the VAT. This often leads to inequalities among select sectors, resulting in additional pressure to exempt more commodities, which can further increase the economic distortion. Finally, excessive use of VAT exemptions and zero-rating increases the government's dependence on other less-efficient types of taxation. Zero-rating and exemptions reduce incentives for savings and capital formation in the economy.

Moldova offers a wide range of incentives for specific sectors, locations, and also for increasing employment. For instance, concessions have been awarded to agriculture, the automotive industry, ICT, renewable energy, textiles, and footwear. Agricultural producers receive VAT-exempt imports of agricultural machinery. The automotive industry, textiles, apparel, footwear, and leather goods industries receive VAT and customs duty exemptions for imported capital goods and are also entitled to six-month VAT and customs duty deferments on other imports.

For VAT, the bulk of tax expenditures comes from exemptions rather than from zero-rating items. Typically, revenues lost from zero-rating are higher than those from exemption because taxes paid on inputs are captured by the tax department in case of exemptions. However, in the case of Moldova, exempt sales form the majority of tax expenditures at 61 percent as compared to 39 percent from zero-rating. Exemptions related to motor vehicles and imported electricity dominate the list with about 13 and 11 percent respectively, while housing, agricultural equipment, medical services, and passenger transport form a smaller share of the revenues foregone. The agriculture sector also receives exemptions on purchases of equipment.

Many of the commodities exempt in Moldova can be fully taxable. This would increase revenues and broaden the VAT base thus increasing the efficiency of the tax system in the process. Examples of commodities that should be seriously considered for being fully under VAT include gambling services, passenger and transportation services, and cars and other motor vehicles. Similarly, tax exemption should be eliminated for accommodation in dormitories, utility services to households such as rental housing, technical maintenance of residential buildings, water supply, sewerage, sanitation, use of elevators, electricity, services delivered by agricultural cooperatives, agricultural tractors, wind and photovoltaic fields construction and installation operations, equipment for enterprises in the collection, processing, and recycling of waste, and goods and services for capital investment on the Giurgiulesti International Free Port.

The goods and services that are currently zero-rated appear to be less problematic. Zero-rating is mostly applied to exports and reexportation of goods produced or transiting through Moldova, which is consistent with best practices in VAT systems. However, special care should be given to relief of VAT and excise on exports because such goods sometimes make their way back into the domestic economy through fair or unfair means. Also, some zero-rated items need to be reviewed and moved into the standard rate regime, or as a compromise, onto the exempt list. For example, there is hardly any justification for granting a zero-rating based on sector type such as services of light-industry enterprises.

Some of the commodities currently exempt in Moldova are usually zero rated, and Moldova may consider applying zero-rating to other goods and services. A lower rate of VAT on basic groceries, even zero-rating these commodities, is not uncommon in VAT systems in other countries. Many countries zero-rate necessities, which may include basic groceries, books, burial services, and electricity. Moldova on the other hand, offers a reduced rate of 8 percent on certain basic food items, such as bread and bakery products, and milk and dairy products, transport and distribution of natural gas services, and specific

horticultural and zoo-related products. Moldova may thus consider zero-rating basic food items such as bread, milk, bakery and dairy products, books, and burial services.

The excise tax regime seems to cover most of the goods normally taxable under excises, but tax rates are comparatively low. The tax base is fairly broad, covering alcoholic drinks, tobacco products, fuel, and some luxury goods. Many other countries apply excises to telecommunication equipment and services, which also is a growing market. The tax rates are both ad valorem and specific. The specific tax rates can target the injurious contents in cigarettes (nicotine), alcoholic beverages, and pollutants in fuels, which also create negative externalities in the economy. However, the excise tax rates are comparatively low for cigarettes and petroleum fuel products that can be subjected to higher rates. On motor fuels, the figures for Moldova are 160 Euros per 1,000 liters on petrol and 77 Euros on diesel, compared to minimum EU rates of 359 and 330 Euros on petrol and diesel, respectively. Most EU countries apply a specific excise tax, plus an ad valorem excise tax on tobacco products and then a VAT on top. The EU has initiated a directive that the specific element in the tax may vary from 5 to 55 per cent of the retail price and at least 70 Euro per 2,000 cigarettes. Excise rates should therefore be adjusted upwards with the dual objectives of reducing the use of goods with negative externality and for more effective taxation of consumption in the economy. In particular, the government has committed to increase by 12 percent (real) the excise on tobacco from the 2016 level of MDL 1.7 billion within two years.<sup>186</sup>

## Conclusion and Recommendations

Moldova has largely been successful in raising and maintaining a high tax effort compared to its peers. However, the heightened needs for investment in both hard and social infrastructure and for attracting further investment, both domestic and FDI, pose a challenge for further reforming the tax systems. On the one hand, Moldova would need to raise the efficiency levels with regard to major income and consumption taxes. On the other hand, the country will need to restructure the tax mix and the fiscal incentives so as to attain the delicate balance of collecting adequate tax revenues and at the same time reducing the undue burden on the business environment.

Such a balance can only be achieved by reviewing the tax regimes as a complete package. While some of the new initiatives tend to reduce the revenue collections through the introduction of a flat PIT rate and rationalization of social contributions, such a revenue loss needs to be compensated through continued improvement in tax administration and through restructuring of the fiscal incentives with the aim of enhancing their effectiveness and reducing the fiscal cost of tax expenditures.

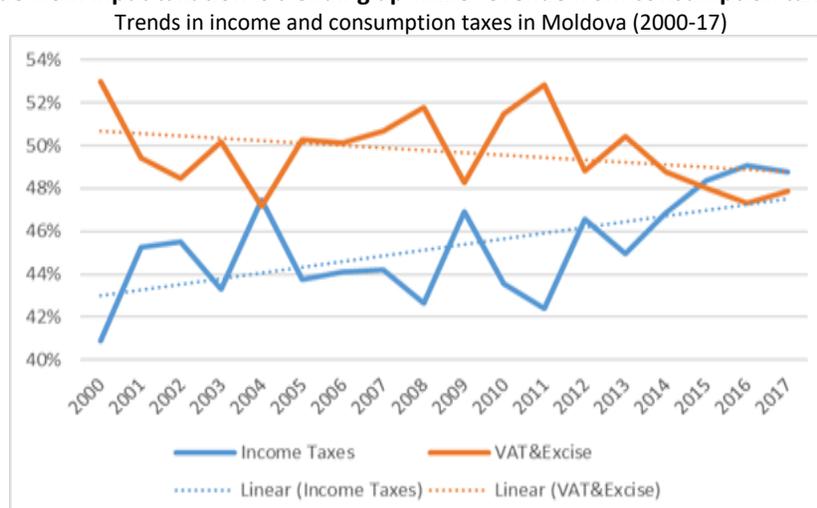
Looking forward, Moldova may consider the following options:

*Rationalizing the tax mix:* During 2000-17, the collection from the main income taxes (PIT and CIT combined) was trending up while consumption-based tax revenues represented by the combined VAT and excise were trending down (

Figure 72). Such movement needs to be reversed for the sake of long-term productivity and economic growth: some rebalance of the tax mix can help maintain the level of revenues or even enhance collection while ensuring that there is a reduced tax burden on factors of production (labor and capital). Recent research (for example, OECD 2010) highlights the order of the detrimental impact of each tax type on growth and suggests that a growth-oriented tax reform would shift part of the tax burden from income to consumption and/or residential property.<sup>187</sup>

<sup>186</sup> World Bank, *Program Document for the Republic of Moldova Economic Governance Development Policy Operation*, (2018).

<sup>187</sup> OECD, *Tax Policy Reform and Economic Growth* (OECD Tax Policy Studies, no. 20, 2010).

**Figure 72. Revenue from input taxation is trending up while revenue from consumption tax is trending down**

Source: World Bank Staff calculations based on Moldova STC data.

*Raising the productivity of the major taxes:* At the current tax setting, the productivity or efficiency of major taxes (VAT, PIT, CIT) is relatively low (Table 11).<sup>188</sup> Compared to its peers and neighbors, Moldova has one of the lowest PIT efficiency ranking, while both CIT and VAT efficiency ranked third in the sample of five lower middle-income countries.

While this aggregate indicator reflects the outcome of both tax policy and tax administration, in the case of Moldova, generous tax incentives account for a significant share of the problem of low revenue intake. Theory and international experience, as presented in OECD 2010 and the joint IMF-OECD-World Bank (2015) study, imply that further tax policy reforms in Moldova would be more conducive to a productivity increase and economic growth by levying major income and consumption taxes on a broader base, possibly at a lower rate, rather than providing targeted relief. A typically low-income tax rate of 12 percent (both CIT and PIT) all the more justifies the imperative to review and rationalize the current overgenerous fiscal incentives.

**Table 11: Tax efficiency in Moldova and regional peers in 2015**

Countries	CIT Efficiency Ratio	PIT Efficiency Ratio	VAT Efficiency Ratio
<i>High income</i>			
Poland	0.097	0.146	0.304
<i>Upper middle income</i>			
Albania	0.126	0.065	0.440
Azerbaijan	0.205	0.074	0.362

<sup>188</sup> Productivity of a major tax is calculated as the share of the actual collection of that tax in GDP divided by the standard rate of the tax.

Bosnia and Herzegovina	0.122	0.186	1.074
Bulgaria	0.213	0.307	0.448
Kazakhstan	0.229	0.146	0.193
Romania	0.147	0.385	0.426
Russian Federation	0.158	0.257	0.293
Turkey	0.065	0.105	0.288
<b>Average</b>	<b>0.157</b>	<b>0.151</b>	<b>0.446</b>
<hr/> <i>Lower middle income</i> <hr/>			
Armenia	0.103	0.172	0.420
Georgia	0.215	0.350	0.613
Kyrgyz Republic	0.232	0.130	0.643
Moldova	0.191	0.187	0.559
Ukraine	0.109	0.279	0.449
<b>Average</b>	<b>0.158</b>	<b>0.224</b>	<b>0.526</b>

Source: IMF Revenue Database 2018 and World Bank Staff calculations.

*Streamlining of taxes on income, wealth, and social security:* As the corporate and personal income tax rates have been harmonized at 12 percent and are now among the lowest in the region, the tax base needs to be broadened by closely scrutinizing and eliminating the multifarious tax exemptions and incentives. As income from dividends, interest, and capital gains are being taxed at a rate even lower than 12 percent, there is hardly any justification for these incentives. The contributions to social security and its distribution are both tax free. They should be brought under taxation either at the time of making contributions or receiving distributions. The newly introduced wealth tax needs to be modified so that the taxable property does not have to meet the dual conditions of exceeding the value threshold as well as the minimum area requirement.

*Strengthening the VAT and Excise tax regimes:* Moldova now has three VAT rates in addition to a zero rate. Multiple rates of 8, 10, and 20 percent would create problems of administration and compliance and are not desirable. For the reform of the VAT regime, the list of exemptions and zero-rating should be closely scrutinized and curtailed. The VAT should have a broad base with zero-rating exclusively applicable to exports and with minimal exemptions. At the current stage, the VAT exemptions in Moldova are excessive and they tend to cause economic distortions due to cascading.<sup>189</sup>

<sup>189</sup> The two sides of the VAT exemptions need to be considered in further policy reform. On the one hand, exemptions narrow the base and thereby reduce the tax collection if such incentives are effective at the last stage of the production-distribution chain. On the other hand, if the exemptions fall into any of the intermediary stages, they would lead to cascading with higher revenue at the cost of economic efficiency. The interview with the Moldova Tax Policy and Customs Legislation Directorate, MOF, shows that the authorities are aware of the need to reduce and rationalize the list of exemptions but are concerned with the current state of pro-poor social expenditure programs.

Excessive use of exemptions and zero-rating increases the government's dependence on other less-efficient types of taxation. It appears that many of the commodities exempt in Moldova can be fully taxable. Specifically, gambling, passenger and transportation services, cars and other motor vehicles, dormitory accommodation and utilities, services delivered by agricultural cooperatives, and so forth, would need to be brought into the VAT net. For the excise, the rates for tobacco and petroleum fuel products are comparatively low and should be raised considerably with reference to the prevalent rate structures as applicable in EU countries.

*Rationalize tax expenditures:* The cost of incentives is not only significant and rising but are instrumental in causing distortions across sectors and regions. Between 2013 and 2017, the revenues foregone from medium, large, and multinational companies have been going up considerably. The government at the same time does not have a system of cost-benefit analysis of the incentive regimes in place, and it is not clear if these incentives are generating any benefits. With a low corporate income tax rate, the fact is that Moldova does not need any tax incentives. A better strategy may be to gradually phase-out the tax incentives, broaden the tax base, and use the additional tax revenues for improving the infrastructure and the regulatory framework in the country. That will be a major positive step in improving the business environment and giving a boost to the economy.

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## Chapter 5. Higher Education Financing and Skills for Technology Absorption

### Introduction

The ability of a society to generate, adapt, and apply knowledge is critical for sustained economic growth and improved living standards. Rapid technological progress, the spread of global value chains, and the increasing importance of knowledge-based capital means that knowledge has become the most important factor in economic development. This refers to not only technical knowledge, but also to knowledge about attributes, that is, the informational characteristics that support analysis and decision-making (World Bank 1999).

In this context, higher education and TVET support knowledge-driven economic growth by: (i) training a qualified and adaptable labor force, including high-level scientists, professionals, technicians, teachers in basic and secondary education, and future leaders for government, civil service, and business; (ii) generating new knowledge through basic and applied research; and (iii) providing a platform for accessing existing stores of global knowledge and adapting this knowledge to local use. Higher education institutions are unique in their ability to integrate and create synergy among these three dimensions. Sustainable transformation and growth throughout the economy are not possible without the capacity-building contributions of an innovative higher education system, especially in low-income countries and transition economies with weak institutional capacity and limited human capital (Salmi, 2012).

The success of East Asian economies underscores the symbiotic relationship among tertiary education, innovation, and growth through the production of research and skills. A recent World Bank report analyzed the positive links between economic growth and tertiary education as measured by the tertiary gross enrollment ratio, science test scores, levels of R&D investment, and the number of scientists and engineers relative to a country's population. Firm innovation surveys undertaken in Indonesia, the Philippines and Thailand showed that the most active innovators are those with higher levels of R&D expenditures and more highly qualified staff, and that are located in more R&D-intensive industries (World Bank 2012).

The recent World Development Report on the transformation of jobs in the world outlines important changes brought about through the digitalization of the economy (World Bank 2018). First, the boundaries of the traditional firm are becoming blurred, as illustrated by the rapid growth of platform marketplaces that connect customers, producers, and providers in new ways. Second, technology is influencing the demand for skills. While the demand for low-skill profiles is declining, "the demand for advanced cognitive skills, socio-behavioral skills, and skill combinations associated with greater adaptability is rising."

Faced with these new trends, countries have no choice but to give a higher priority to human capital development.

Investing in human capital is the priority to make the most of this evolving economic opportunity. Three types of skills are increasingly important in labor markets: advanced cognitive skills such as complex problem-solving, socio-behavioral skills such as teamwork, and skill combinations that are predictive of adaptability such as reasoning and self-efficacy. Building these skills requires strong human capital foundations and lifelong learning (World Bank 2018; 13).

In early October 2018, the World Bank released the first issue of its new Human Capital Index, which measures countries' progress in linking key investments in their people to economic growth. For this purpose, the Index looks at productivity-related human-capital outcomes such as child survival, the

quantity and quality of education, and healthy growth among under-fives. In the Human Capital Index, Moldova achieves 0.58 points, within a range from 0 to 1. In education, it scores below the average of Eastern European and Central Asian countries (ECA). Moldovan children study an average of 11.8 years, compared to 13.0 for ECA children. In terms of quality of basic education, the average harmonized test scores for Moldova are 436, significantly below the average ECA scores of 495.

Moldova is facing limited human capital accumulation and low levels of innovation among firms. Skill mismatch is one of the main factors behind these issues. 2015 data indicate that about 30 percent of graduates do not work in the professional area corresponding to the degree they have obtained. According to survey data, 41 per cent of employers identified skill levels as a major constraint and 15.7 per cent of enterprises consider the inadequately educated workforce as a major obstacle.<sup>190</sup> Also, the lack of a qualified labor force is often mentioned as a reason not to settle a foreign business in Moldova.

The higher education system of Moldova has undergone important changes since the transition of the early 1990s. The country, which inherited a Soviet-type education structure and tradition, suffered significantly from the economic crisis in the years following independence in 1991. Since then, Moldova has made considerable efforts to achieve better economic conditions and has sought to transform the higher education and TVET system in order to improve the quality and relevance of its education programs and better serve the needs of the new market economy. The 1995 Law of Education was amended in 2005 after the country joined the Bologna process. Later, in 2014, Moldova adopted the Education Code, which is the main official document governing the sector. Since then, the Moldovan higher education institutions have worked to comply with the new degree structure and the European quality assurance framework. But a lot of work remains to be done in order to fully harmonize with European standards.

The first priority of the “Moldova 2020” Plan’s seven-pillar strategy is to align “the education system to labor market needs in order to enhance labor productivity and increase employment in the economy”. Indeed, for a country like Moldova with limited natural resources and a small economy, the contribution of the higher education system to economic diversification and growth is of great importance. Higher education can support skills development, research and technology transfer by: (i) training a qualified and adaptable labor force; (ii) generating new knowledge through basic and applied research; and (iii) providing a platform for accessing existing stores of global knowledge and adapting this knowledge to local use. (Salmi 2017).

Because of rapid changes at the global level, radical changes are looming for the higher education system of Moldova. A 2013 report published in the United Kingdom proposed the image of “an avalanche” to describe the radical transformations affecting higher education in many parts of the world (Barber et al. 2013). A growing number of rupture factors are at play in transforming the ecosystem in which higher education institutions are operating all over the world, which is likely to drastically influence how Moldovan universities will perform their teaching and research functions in the near future. Among these rupture factors are technological innovations such as flipped classrooms for interactive and peer-based learning, mass online open courses (MOOCs) reaching and linking hundreds of thousands of students all over the world, new forms of competition from for-profit and corporate universities that provide professional qualifications closely focused on labor market needs, and new accountability modalities such as the global rankings or student satisfaction surveys (Salmi 2015).

How the Moldovan higher education institutions adjust to these new challenges will determine, to a large extent, their ability to promote innovation and serve the national economy well. So far, a number of deficiencies, including heavy reliance on manpower-planning approaches that failed during the Soviet

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<sup>190</sup> World Bank Enterprise Survey (2015).

Union era and that are even less well suited to the market economy, insufficient attention to the new competencies and skills needed by private sector employers, poor learning infrastructure in many institutions, and a culture that favors conservatism and frowns upon innovation, have not served the innovation and the growth agenda very well. The historical-based allocation of public resources has been another key constraint, making the formulation of a sustainable financing strategy for higher education difficult.

Against this background, this chapter analyzes the main challenges facing the higher education system of Moldova and reviews policy options to improve its contribution to skills development and technology transfer and to put in place a long-term sustainable financing strategy. It recommends a number of changes that can boost the performance of the higher education system. First of all, high school graduates must come out with higher learning outcomes. Second, the universities need to introduce curricular and pedagogical innovations in close partnerships with private sector employers. Third it is important to modernize governance and management practices. Finally, the Government of Moldova could implement a three-pillar funding model that would encourage higher performance and innovation throughout the entire higher education system.

### **Skill Mismatches in Moldova**

In the early 2000s Moldova was known for its cheap and relatively qualified labor force. Since 2004 this advantage has brought benefits by increasing FDI from companies looking to take advantage of the competitive labor force in the region. At the same time, access to specialized technical and professional education (vocational and higher education) increased, but Moldova has lost its previous high reputation.

Today, employers report that they do not find the right set of skills among graduates, and they complain about the poor quality of the labor force. According to the 2013 World Bank Enterprise Survey, 41 per cent of employers identified skill levels as a major constraint and 15.7 per cent of enterprises consider the inadequately-educated workforce as a major obstacle.

Also, the lack of a qualified labor force is often mentioned as a reason not to settle a foreign business in Moldova. Therefore, human capital was identified as one of the major constraints to economic growth in Moldova (along with the business climate, access to finance, and road infrastructure). It is paradoxical that with an employment rate under 40 per cent and rising unemployment and under-employment rates, employers qualify Moldova as a country with an insufficient labor force. The problem of the qualified labor force deficit derives mainly from several reasons.

First, there are deficits at certain qualification levels and in some areas (for example, technical sciences). Students prefer to enroll in easy fields of studies. This could be partly addressed by interventions in the level of subsidies of some fields of study and through professional orientation courses for students who graduate from lower secondary education levels.

Secondly, there is poor quality of education in all subsystems. This issue needs to be addressed through comprehensive reform, including changes in the curriculum, financing of specialized education, and higher involvement of the business sector in all levels of education, including continuous learning. Even in the fields of study with a sufficient number of graduates (for example social sciences, business, and law) there are often complaints about the lack of practical skills of young graduates. The participation of the business sector in training programs is limited, with few internships offered to students.

Third, the high wage gap between Moldova and other European countries, or even compared to some CIS countries, forces people to leave as long as there is a possibility to find a job outside the country. Moreover, even those who stay in Moldova do not have enough incentives to work for low wages if they

receive remittances from abroad. There seems to be a vicious circle in place, whereby on one side productivity is low, which does not satisfy the employers, but where on the other side the wages are low, which does not satisfy the employees.

The fourth reason is the preference of students for higher education rather than TVET. The fact that the business sector often mentions the need for a skilled labor force does not result in increasing the enrollment plans in vocational education training (VET) schools. Actually, most of the employers confirm that if the VET graduates were trained adequately, there would be enough of them. Moreover, graduates of higher education find jobs more easily (the employment rate is higher and unemployment rate is lower within this population group). Thus, there might be a few explanations: (i) either there is really a higher demand for graduates with higher education than with vocational education (contrary to businesses complaints); or (ii) employers, with an excess of graduates with higher education, hire graduates of higher education for positions that actually require a lower level of skills and knowledge; or (iii) the quality of vocational education is very low, discouraging employers from hiring these graduates. The quality and relevance of vocational education must therefore be improved. Only by ensuring decent jobs for vocational education graduates is it feasible to attract students to vocational schools. Therefore, the participation of the business sector in the formulation of the curricula and even in the educational process should be the first step. Also, academic and professional guidance should be offered to graduates of lower secondary education, which is currently unavailable.

The preference for “easy” fields of studies is another contributing factor. Currently about 73 per cent of annual graduates of higher education are enrolled in social sciences, business, and law. The demand for technical and hard sciences is very low, whereas the need for specialists in these fields is higher. Science, technology, engineering and math (STEM) graduates are important for the development and competitiveness of the national economy.

The importance of life-long learning is largely underestimated in Moldova. The share of adults participating in training in Moldova is under 1 per cent. However, in a continuously changing economy driven by rapidly changing technology, the need for skills’ update is essential. Unfortunately, few companies have the necessary financial resources for investment in training, which causes the obsolescence of the skills of old workers and accentuates the skills mismatch. Therefore, it is necessary to both educate and stimulate employers to invest in training their employees. Currently, many employers do not even know about the legal stipulations regarding the need to spend two percent of the remuneration fund for the training of the employees. Also, it is necessary to develop mechanisms to validate informal knowledge and skills acquired on the job. Currently there are many individuals with skills and competences acquired through experience in the country or abroad who lack a certificate. The validation of this knowledge might stimulate employers and employees to invest in their training.

Finally, migration is also contributing to the mismatch. The outward migration of high school and university graduates is also a major challenge for the Moldovan labor market. Data on the annual flow of authorized emigrations reveal that it is mainly young persons who are emigrating. The 25–34 years old group (23 percent) and the 35–44 years old bracket (16 percent) held the largest shares of the total number of authorized outflows in 2015 (2,284 persons), followed by the 15–24 (15 percent) and 45–54 years old groups (11 percent). At the same time, it should be mentioned that the youth (persons aged 15–29 years) represented more than one fourth (27 percent) of the total number of persons who emigrated with authorization in 2015. In the group of persons closer to the retirement age (65 years old and older), the number of persons leaving the country to settle down permanently abroad decreased by 2.3 times in the period 2010–15. About one third of emigrants attained secondary and secondary professional

education levels, and 13.7 per cent reached incomplete higher education or university education levels in 2014. Larger shares of emigrant women achieved higher education as compared with men.<sup>191</sup>

Statistics show that the level of education, which influences the capacity to become integrated into the labor market abroad, plays a significant role in determining the migration flow. In 2015, about 50 per cent of the total number of migrants were found to have attained secondary education (lyceum, gymnasium), and 37 per cent were found to have achieved vocational and professional secondary education. Persons with higher education accounted for 13 per cent of the total number of migrants. It is important to mention that the shares of persons with higher education have increased as compared to 2010, especially for men (from 8 percent to 12 percent).<sup>192</sup>

With administrative data from the SE SIRC “Registru”, it is possible to analyze the situation of authorized emigration, including the deregistration from the place of residence before leaving the country. Based on this data, it was estimated that 106,600 persons were living abroad in 2015. Annual authorized emigration registered a stable downtrend, with the decrease rate reaching 3.4 per cent in 2015 as compared with 2013, and 48.5 per cent as compared with 2010. The phenomenon is higher in urban areas than in rural areas, with more women emigrating in an authorized manner than men. People leaving the country are primarily trained young people with professional secondary education, higher education, or incomplete higher education. The main countries of destination are Ukraine and the Russian Federation, which is where almost 56 per cent of the total number of emigrants are found. The United States, Germany, and Israel are other countries that have significant shares of emigrants from the Republic of Moldova.<sup>193</sup>

## **The Role of TVET and Higher Education in Supplying a Skilled Labor Force**

### **TVET education**

Moldova has made significant progress since 2010. It has been on the government’s policy agenda and there was commitment from both the government and the development partners to undertake concrete steps towards important reforms. Reorganization of VET institutions is one of the main objectives of the Government Decision No. 97 from 01.02.2013<sup>194</sup> regarding the adoption of the VET Sector Development Strategy 2013-2020. The adoption of this strategy itself is one of the very important provisions of the National Development Strategy “Moldova 2020”. The National Development Strategy refers to the role of vocational education and training for the sustainable development of the country and puts an emphasis on the need to focus on connecting the education system with the requirements of the labor market.

Since 2005, the number of institutions in the TVET level of education decreased from 139 to 92. Up until 2015, almost all craft schools were reorganized as professional schools or closed. In 2015, out of 26 institutions, only 2 remained open. Reorganization of VET was done based on a mapping exercise aiming at closing the “weakest” schools and consolidating the others. For example, the Ecologic College located in Chisinau received under its supervision the VET Schools from the Todiresti community 27 km away. Figure 73 shows the evolution of the number of TVET colleges. The decreasing number of institutions is driven by the continuous fall in student numbers, in turn reflecting the demographic evolution of Moldova.

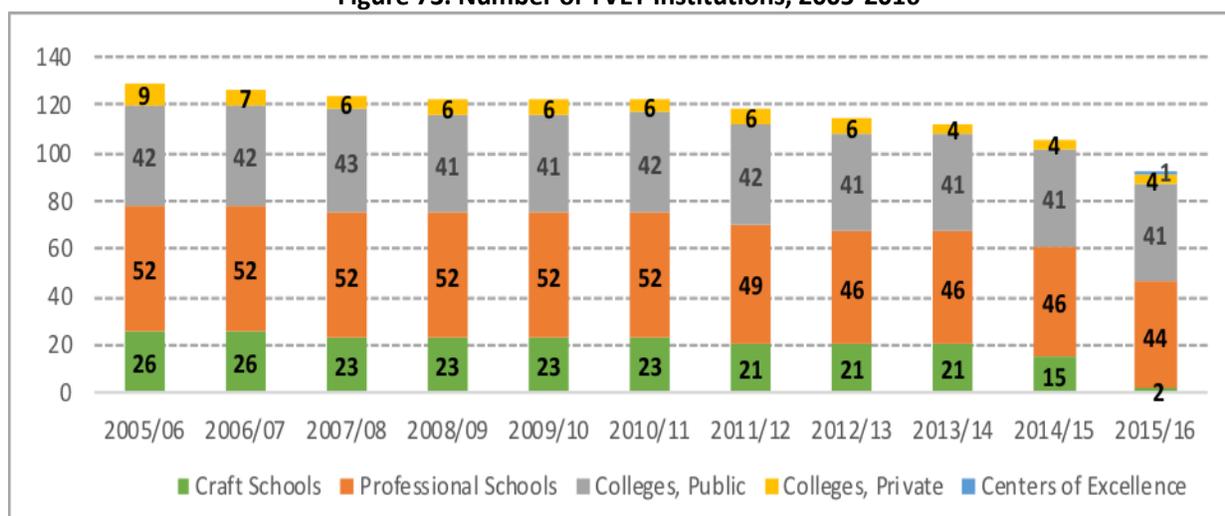
<sup>191</sup> Extended Migration Profile of the Republic of Moldova 2010–2015. Overview of Migration Trends for the Period 2005–2015. International Organization for Migration. Chisinau, (2017), 13-14.

<sup>192</sup> Extended Migration Profile of the Republic of Moldova 2010–2015. Overview of Migration Trends for the Period 2005–2015. International Organization for Migration. Chisinau, (2017), 27-28.

<sup>193</sup> Extended Migration Profile of the Republic of Moldova 2010–2015. Overview of Migration Trends for the Period 2005–2015. International Organization for Migration. Chisinau, (2017), 90.

<sup>194</sup> <http://lex.justice.md/md/346695/>

Figure 73. Number of TVET Institutions, 2005-2016



Source: World Bank Staff based on National Bureau of Statistics

With the support of the European Union (EU), the Republic of Moldova initiated a wide reform at this level of education in 2012. The support included 5 billion Euros in the form of technical assistance, and 20 billion Euros as a Budget Support Program (BSB) triggered by 12 major indicators, including among others: creation of Centers of Excellence; adoption of a per-student funding formula; elaboration of occupational standards; qualifications and curriculum; rehabilitation and equipment acquisition for institutions and their dormitories; and so forth.

Despite the efforts of the government, the reforms have not yet shown all the expected results. The per-student funding formula has been put in place. Vocational institutions receive their budget based on the number of students and a number of coefficients covering costs such as salaries for teaching staff and maintenance of the schools. Per-student financing does not include social costs (such as addressing the needs of the marginalized groups of students), costs for the dormitories, and costs associated with Excellence Centers.<sup>195</sup> Dropout rates continue to be high (30-40 percent), however, which means that more needs to be done to improve the quality and relevance for the TVET institutions.

These interventions of the EU-supported BSB program are indispensable to address the current challenges of the Moldovan TVET system. Though the results of the project will be seen only in the near future, it is clear from the international experience that the interventions should definitely help to make the TVET system more relevant to labor market needs. Further work is needed to improve the qualifications of TVET teachers and to modernize management. The National Qualifications Framework must also be adjusted to harmonize TVET and higher education.

Overall, Moldova is facing a complex and challenging context involving employment, with the existence of insufficient and poor-quality jobs for TVET graduates, low productivity, and persistent informal arrangements and inequalities, all of which require multidimensional responses that cut across various policy areas (for example, economic, fiscal, and labor). This requires an integrated policy response that

<sup>195</sup>The more expensive a certain area of specialization is (for example, interior design or similar fields), the more vivid differentiations appear between the allocations per institutions, which is why once every three years a review of the coefficients should be done. These coefficients are based on the specializations the institutions provide and is accordingly done with them periodically being reviewed. This is where the nomenclature of the areas of professional training for specializations and qualifications in the secondary and post-secondary vocational education is provided. When the review of coefficients is completed, significant importance is given to the specialization categories.

[http://www.particip.gov.md/public/documente/137/ro\\_2423\\_NomenclatorNiv.-IVV.pdf](http://www.particip.gov.md/public/documente/137/ro_2423_NomenclatorNiv.-IVV.pdf).

addresses both macro and micro dimensions, labor demand and supply, and fosters both quantity and quality of employment.

Significant steps have been taken to stimulate labor market development and functioning. The legal and institutional framework governing the labor market has been improved. Also, labor market statistics and monitoring processes have been adjusted to market economy requirements. The EU Mobility Partnership has provided significant support to these developments through the EU-funded Targeted Initiative for Moldova, which strengthened the capacity of the country to manage labor migration.<sup>196</sup>

A new National Employment Strategy for 2017 to 2021 was developed with the support of the International Labor Organization and it is now being implemented. Effective implementation, reporting, monitoring, and evaluation of the strategy will involve all of the main actors in the sector, including the Ministry of Labor; the National Commission for Consultation and Collective Bargaining; the National Employment Agency, which has a leading role in its implementation; the National Bureau of Statistics; the National Institute of Economic Research; the National Confederation of Trade Unions; the National Confederation of Employers; and the Chamber of Commerce and Industry.

The Ministry of Labor, Social Protection and Family is promoting closer cooperation with the business sector and has played a leading role in establishing sectoral committees. In 2013, a resolution of the National Committee for Collective Bargaining and Consultation adopted a framework regulation on the activity of the sectoral committees as consultative bodies at the sectoral level. There are currently five sectoral committees, covering construction, agriculture and food, transport and road infrastructure, information and communication technologies, and trade workers in nonfood sectors. The committees are involved in the work on identification of skills needs and the development of occupational standards. The draft law to strengthen the legal status of the sector skills councils has gone through many different versions, and the Ministry of Labor recently sent a new draft to the government for approval. The law is essential in defining the role of the councils in developing occupational standards and in supporting VET implementation.

Many institutions in Moldova are involved in producing information related to labor market skills needs and a significant amount of data has been gathered, but there is a lack of analysis, management, and dissemination of this information to the relevant stakeholders. Interested stakeholders do not always have access to the data and are often unaware of where to find the information or they do not understand how to interpret it.<sup>197</sup>

### **Higher education**

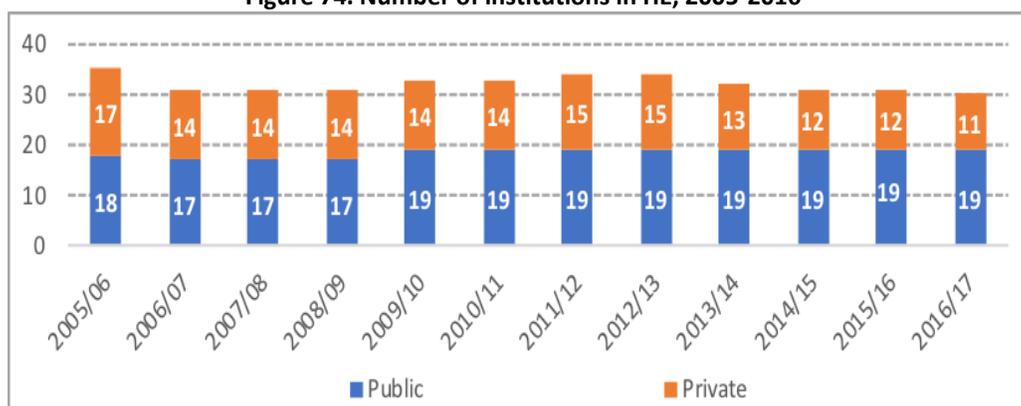
Since 2005, the evolution of the Moldovan Higher Education system has been largely influenced by the norms of the Bologna Process and the authorities' efforts to adjust to the new European standards established in this context.

Currently, 30 higher education institutions operate in Moldova, of which 19 are public and 11 are private (Figure 74). 26 institutions operate in the Chisinau municipality alone, and 1 institution operates in each of the other main cities. Four universities have closed down since 2012. Given the trend of population decline, the number of institutions will likely continue to decrease.

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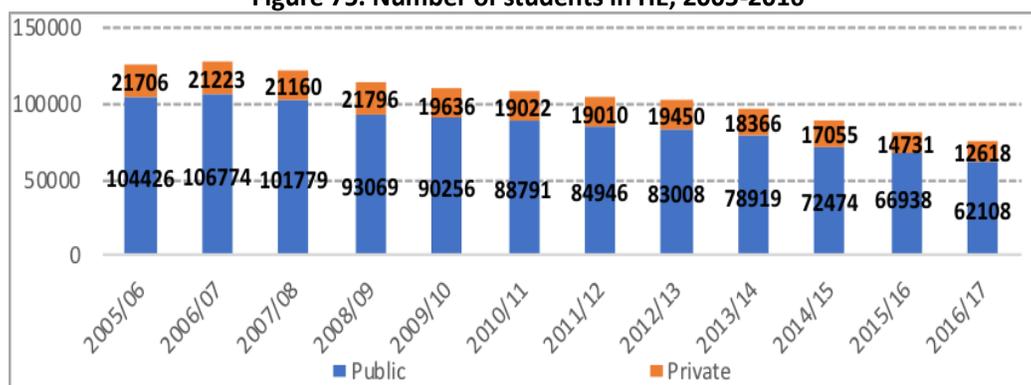
<sup>196</sup> Republic of Moldova. *Education, training and employment developments 2016* (European Training Foundation, 2017) 7.

<sup>197</sup> Republic of Moldova. *Education, training and employment developments 2016* (European Training Foundation, 2017), 8.

**Figure 74. Number of institutions in HE, 2005-2016**

Source: National Bureau of Statistics

The sector enrolled 74,700 students in 2016, of which 83 percent studied in public higher education institutions and 57.3 percent were females. Compared with 2015/16 the number of students decreased by 4,800 in public institutions, and by 2,100 in private institutions, a total decrease of 8.5 percent. Since 2005, the total number of students has decreased by 41 percent. It is expected that by 2020 the number of students will drop further to 50,000-55,000, representing an average of 1,700 students per university. The decline is due to a number of factors:<sup>198</sup> falling birth rate, emigration, availability of scholarships to study abroad (mainly Romania and Russia), and an increase in the number of high-middle class parents who can afford (and prefer) to send their children to study in EU countries. Figure 75 shows the evolution in the number of students since 2005.

**Figure 75. Number of students in HE, 2005-2016**

Source: National Bureau of Statistics

Unlike what happened in the TVET sector, reforms in higher education have lagged, despite the importance of that educational level in the formation of a skilled workforce. The sector faces several challenges, including outdated curricula and pedagogical practices, low research output, scarce linkages with employers, weak governance, and traditional funding mechanisms.

The annual admission plan for higher education, as for TVET, is coordinated with the Ministry of Health, Labor and Social Protection. Currently the Ministries of Education and Labor are jointly responsible for conducting some analysis and calculating projections for the sector to determine the exact number of places for each discipline.

<sup>198</sup> [http://www.euniam.aau.dk/fileadmin/user\\_upload/EUniAM\\_WP4\\_Restructuring-HE-Moldova\\_v12.pdf](http://www.euniam.aau.dk/fileadmin/user_upload/EUniAM_WP4_Restructuring-HE-Moldova_v12.pdf)

Many existing programs are overly theoretical and lack relevance to the world of work. Observers also report overenrollment in courses with limited labor market prospects. Few faculties have internationalized their curriculum or encouraged their students to learn foreign languages. Very few programs have adopted modern pedagogical practices to improve the learning experience of the students and to enhance their generic competencies (for example, problem-solving, communication, and teamwork). Few higher education institutions have established new programs and transformed their curriculum to adapt to the changing economy. Institutions by and large have weak linkages to firms.

One of the challenges related to student placement for internships has been the fact that companies do not have the capacity to guide and monitor the students properly. In the early 2000s,<sup>199</sup> students' involvement during their "practice" was superficial. The students did not have many opportunities to learn or practice relevant skills. In addition, due to the fact that the largest share of companies in Moldova are SMEs, they did not have dedicated staff to guide students during their internship.

The research output of Moldovan universities is quite small, and the research environment lacks a proactive national innovation and research policy, measures to fight inbreeding, sufficient public funding for research, and clear incentives to reward outstanding research performance among academics. The Webometrics ranking provides a useful benchmarking framework to compare the results of the top two Moldovan universities with other leading universities in the region. The data show that Moldova finds itself at the bottom of the group (Table 12).

**Table 12. Webometrics Ranking of Selected Universities of the Former Yugoslav Republic, Romania and Moldova (as of July 2018)**

University	World Rank (2018)
University of Ljubljana	295
University of Zagreb	668
University Babes Olyai	894
University of Bucharest	971
University of Belgrade	1028
University of Skopje	1627
University of Sarajevo	1820
State University of Moldova	3303
University of Montenegro	3347
Technical University of Moldova	3475
University of Pristina	4717

Source: Webometrics website <http://www.webometrics.info/en/>

<sup>199</sup> Creating job opportunities for youth in Moldova project, implemented in 2004-05 by the Open Government Institute (formerly CMB Training Center) that worked both with potential companies interested in hosting students and with students directly.

In terms of governance, the Moldovan universities enjoy a high level of autonomy, including in financial management. Universities can make decisions on, among others: the organization and delivery of educational and research processes; the fields of study to provide; tuition fees; curriculum content (in line with state educational standards); staff recruitment and management; property management; and resource generating activities.

Finally, as far as funding is concerned, estimates based on data provided by the Ministry of Education, Culture and Research put the public investment in higher education at 0.6 percent of GDP. While this is slightly larger than the level of public spending in many CIS and Balkan countries, it is low compared to the OECD average of 1.1 percent and the levels achieved by Slovenia (1.3 percent) or even Croatia (0.7 percent). Public universities receive a block grant from the national government; private higher education institutions receive no public resources. The rapid decline in student numbers has meant that public expenditures per student have increased substantially in recent years. In 2015, for example, the national level allocations to universities were 9 percent higher than two years earlier.<sup>200</sup> Yet, as discussed later, the prevailing allocation of resources is not linked to universities' performance or to students' outcomes.

Avoiding the proliferation of higher education institutions is one of the challenges that all countries with a small population face. Table 13 provides some elements of benchmarking in that respect, by showing the number of public and private universities in a number of former socialist countries in Eastern Europe, the Caucasus, and Central Asia, as well as Northern Europe. The data show unequivocally that Moldova has far too many public universities relative to its population.

**Table 13. Country Population and Number of Universities**

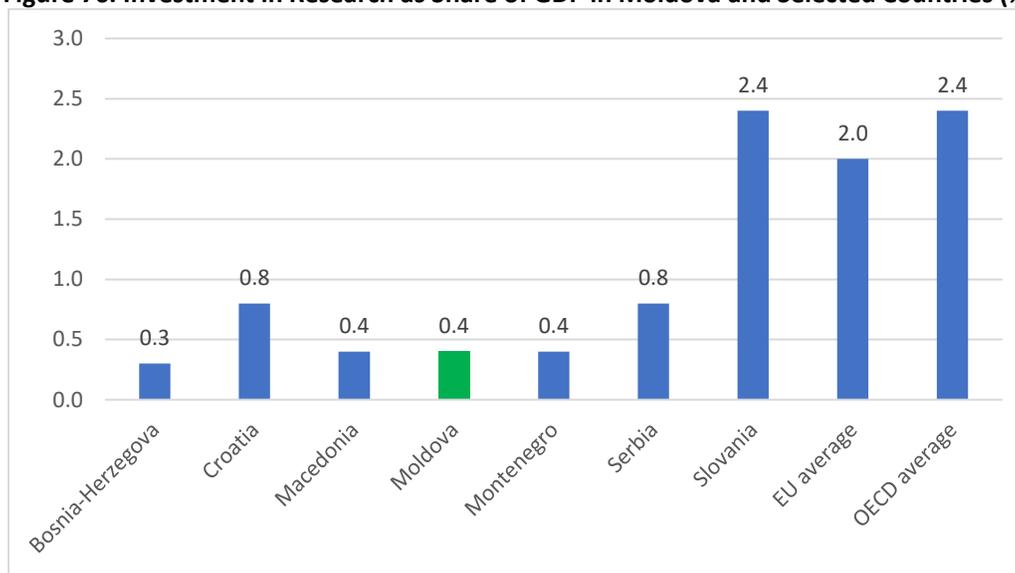
Country	Population (Million)	Public Universities	Private Universities
Armenia	3.1	16	40
Azerbaijan	9.7	19	7
Croatia	4.4	8	3
Denmark	5.6	7	0
Finland	5.5	14	0
Georgia	4.2	17	28
Kazakhstan	16.9	43	73
Kyrgyzstan	5.6	33	21
Macedonia, FYR	2.1	5	17
Moldova	3.4	19	11
Slovenia	2.0	5	22

Source: World Population Atlas; European Commission Tempus Program

<sup>200</sup> <http://documents.worldbank.org/curated/en/897081523894080457/Moldova-Education-sector-public-expenditure-review-selected-issues>.

The funding situation is slightly worse as far as research funding is concerned. Even though the Education Code has clear provisions on the organization of research in universities, the exploitation of research results, and the proper rewarding of inventors' intellectual property rights, Moldova's investment in research and development is modest, at 0.4 percent of GDP (Figure 76; Table 13). By contrast, the EU Lisbon Innovation Agenda adopted in 2000, which aims at transforming Europe into the most dynamic knowledge economy of the planet, called for an annual investment equivalent to at least 1 percent of GDP. As a result of poor investment in the area of R&D, the research capacity and output of Moldovan universities are low.

**Figure 76. Investment in Research as Share of GDP in Moldova and Selected Countries (%)**



Source: Global Innovation Index and OECD Science and Technology Indicators

## Higher Education in Support of Innovation and Productivity Growth

To address all the challenges discussed in the previous paragraphs, this section explores ways of improving the contribution of higher education to the national innovation system by analyzing two dimensions. First it proposes a number of actions to increase the performance of existing institutions in training well-qualified professionals with relevant skills and producing high-impact research in Moldova. Second, it defines what a sustainable financing system for higher education would entail to allow the higher education institutions to operate with an optimal level of resources to accomplish their training and research missions.

### Improving the relevance of teaching, learning and research

The Moldovan authorities and university leaders could consider several measures to improve quality, raise student learning outcomes, and increase the relevance of programs, including (i) curricular and pedagogical innovations, (ii) measures to reduce academic inbreeding, (iii) reinforced quality assurance, and (iv) strengthened relationships with the productive sectors and the economic environment.

### ***Curricular and pedagogical innovations***

Moldova has identified the ICT sector as a priority to drive economic growth.<sup>201</sup> Based on its comparative advantage in the region for this sector, it may contribute significantly to economic development. Yet, due to outward migration, lack of qualified academics in STEM programs in secondary schools, and ineffective academic and career guidance, the number of new applicants for this and related specialties in higher education institutions falls significantly short of labor market needs. It would therefore be important to revitalize STEM programs at the university level.

The Massachusetts Institute for Technology (MIT) recently published the findings of a major study looking at the evolution of engineering education, which could help the Moldovan universities consider relevant innovations in their own science and technology programs, as it attempts to make the entire education experience more student-centered (Box 19).

#### **Box 19. The Future of Engineering Education**

The trend in engineering education is to move towards socially relevant and outward-facing engineering curricula. Such curricula emphasize student choice, multidisciplinary learning, and societal impact, coupled with a breadth of student experience outside the classroom, outside traditional engineering disciplines, and across the world. While many of these educational features appear within engineering programs at many “current leader” institutions, they are often “bolt-on activities” and are isolated within the curriculum. As a result, much of the benefit of these experiences remains unexploited because they are unconnected with other curricular components and students are not encouraged to reflect upon and apply what they have learned in other areas of the degree program.

In contrast to the “current leaders,” many institutions identified as “emerging leaders” in engineering education typically deliver distinctive, student-centered curricular experiences within an integrated and unified educational approach. In most cases, their curricula were designed from a blank slate or were the result of a recent systemic reform. Experiences such as work-based learning and societally-relevant design projects are embedded into the programs in a way that provides a solid platform for student self-reflection and a pathway for students to both contextualize and apply the knowledge and skills they have gained elsewhere in the curriculum. However, many of these “emerging leader” exemplars – such as at Olin College of Engineering and Iron Range Engineering – cater to relatively small cohort sizes. The key innovations that are likely to define the next chapter for engineering education are the mechanisms by which such features can be integrated across the curriculum at scale: delivered to large student cohorts under constrained budgets.

Source: Graham (2018), iii and iv.

Overall, the focus of curricular and pedagogical innovations should be on modernizing program content and making delivery more effective. The ministry should provide incentives to move away from traditional teaching methods and make teaching and learning more interactive, collaborative, and experiential. Today’s cohorts of young students – often described as the e-generation or renaissance kids—have grown up with the Internet and been learning since their young age from computer screens, websites, and visual media. Traditional ways of teaching have been found increasingly unsuccessful in engaging and motivating the e-generation. Mounting evidence provided by the cognitive and learning sciences indicates that interactive pedagogical approaches facilitate an effective learning experience. As the Institute of Play’s

<sup>201</sup> <http://parlament.md/LinkClick.aspx?fileticket=NHHQMUX52ul%3D&tabid=89&language=ro-RO>

mission statement explains, “... our world is changing so quickly that we can only begin to imagine what the future will hold. But we are failing to teach our kids the skills and knowledge they need to succeed in today’s world. So how will we prepare them for jobs that haven’t even been invented yet? The real work of a 21st century education is to spark the passion for lifelong learning that our kids will need to navigate their way to a promising tomorrow.”<sup>202</sup>

Therefore, the establishment of well-resourced Teaching and Learning Centers in all universities should become a priority in support of pedagogical innovations that would facilitate active learning (design-based or problem-based learning, gaming, simulations, role-playing, peer-to-peer learning, artificial intelligence software for independent learning, and so forth). These centers can rely on a range of training activities, including capacity-building workshops and mentoring, to support the development of innovative pedagogical approaches among the teaching staff.

International experience suggests a few lessons regarding the promotion of innovative teaching and learning practices. First, some countries, for example the United Kingdom, have found it convenient to require all PhD candidates to get a teaching certificate before completing their doctorate. This is a first step towards sensitizing future university professors about the importance of good teaching. Along the same lines, a few universities in the United States have begun offering teaching certificates for community college professors.

Second, it is important to offer appropriate incentives that reward teaching excellence on a par with outstanding research. Professors must also be allowed the necessary time to work on improving their teaching performance. Finally, early integration of teaching and research is a powerful way of making the educational experience more stimulating and effective. In leading United States research universities, for instance, “...the co-location of research with education gives rise to large, positive synergies, ensuring that graduates carry with them into industry knowledge of cutting-edge research, techniques, and instrumentation” (Executive Office of the President of the USA 2012: 18).

The rapid development of e-learning in general and MOOCs in particular requires targeting policy and technical interventions to help the Moldovan universities make the best possible use of these new opportunities for modernizing their curriculum in an accelerated fashion. First, the Ministry of Education, Culture and Research could accompany all interested institutions in the systematic exploration of successful e-learning approaches and the dissemination of lessons learned. Second, they could provide a platform for identifying good practices in the recognition of digital certificates for online courses given by prestigious foreign higher education institutions and their integration into the degrees offered by the Moldovan universities.

The introduction of innovative teaching and learning practices that promote interactive and collaborative learning also imply remodeling the physical infrastructure and environment of universities. From the flipped classroom, where the professor does not teach but essentially guides and facilitates self-learning and peer learning, to studios and open-space classrooms designed to support design-based learning in teams, the new learning facilities represent a flexible learning environment that breaks away from the traditional classroom and lecture hall.

### ***Reducing the university’s hiring of its own graduates (inbreeding)***

To improve the quality of teaching and research, several measures can be envisaged to reduce inbreeding in the Moldovan universities. At the national level, the Ministry of Education, Culture and Research can use its regulatory powers to incorporate, among the accreditation criteria, guidelines about the

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<sup>202</sup> <http://www.instituteofplay.org/about/>.

maximum proportion of “inbred academics” in each university, faculty, and even academic department, to create a more desirable minimal proportion of foreign academics or foreign-trained Moldovan academics, and to enhance academic mobility more generally. In addition, the Ministry could offer a range of financial incentives to support employment opportunities in other universities for recent PhD graduates and young researchers, promote short-term outbound academic mobility for academics without international academic experience, subsidize the recruitment of foreign academics and/or Moldovan scholars employed in foreign universities, fund research projects that involve international collaborations, and encourage nonacademic institutions (research institutes, state agencies, and companies) to hire scientists.

At the institutional level, universities can define rules to limit the number of PhD graduates recruited directly after they finish their research degree, establish promotion criteria that take into consideration experience in foreign academic settings – including at least a short stay at a good quality foreign university - provide guidelines on the maximum proportion of “inbred academics” in each department, and set up joint doctoral programs with partner universities. To accompany these policies, universities can set aside funding for academic mobility and collaborative research projects.

At the end of the day, the best mechanism to prevent inbreeding is to have in place a fully transparent and meritocratic recruitment and promotion process that allows for open competition on the basis of objective measures of academic achievement.

### ***Reinforcing quality assurance***

Considering the large number of traditional, rote-learning based programs that operate in Moldova today, the Ministry of Education, Culture and Research should watch carefully and possibly optimize substandard institutions and programs, including in the public sector. In addition to strengthening the official quality assurance mechanisms, the ministry should also consider offering incentives for the establishment and/or strengthening of internal quality assurance units in all universities, which would be essential to the development of a genuine and effective quality assurance culture.

### ***Strengthening linkages with the productive sectors and the regional economy***

Strengthening linkages with industry is the most effective way of increasing the relevance of higher education programs in Moldova. The universities could use a large variety of mechanisms, including internships for undergraduate students, in-company placement of research students and academics, and the use of practitioners from industry as visiting lecturers. Incorporating training for entrepreneurship into regular university programs can also help bring universities closer to the productive sectors. Finally, the institutions may consider establishing cooperative learning programs that alternate on-campus learning periods and regular in-firm internships (Box 20).

#### **Box 20. Lessons from Co-operative Programs**

##### *Principles and advantages*

Cooperative education is a model that alternates academic studies with relevant work experience in a field directly related to a student's academic or career goals. The advantages of this model are considerable: it allows students to gain relevant work experience; apply theoretical knowledge gained in the classroom; and clarify career plans. It also helps students build contacts with employers and establish networks to facilitate finding employment upon graduation. Working as part of the studies program helps finance education; it is also useful for learning how to behave on a job and in general to develop the skills which employers want. The advantages for employers are also significant since they have “access to well-prepared short-term workers, flexibility to address human resource needs, cost-effective long-term recruitment and retention,

partnerships with schools, and cost-effective productivity” (The National Commission for Cooperative Education, USA).<sup>203</sup>

#### *Co-Op at the University of Waterloo in Canada*

Waterloo is home to the world’s largest co-op program – 15,800 undergraduate co-op students (more than 56 percent of the full time undergraduate population at the university and more than twice as many students as the next largest program in the world) and 3,500 partner employers around the world (StudyinCanada.com).<sup>204</sup> A co-op student at Waterloo graduates with the same number of study/academic terms as a non-co-op student, plus up to two years of work experience in different professional areas. The student has four to six work terms (usually four months long each), to try out a variety of careers to find out his/her interests before graduating. On average, by the time the student graduates, he/she has already earned from \$25,000 to \$74,000, resulting in smaller student loans than other students and a greater capacity to pay them back. Graduates of Waterloo's co-op programs earn about 15 percent more upon graduation than graduates of non-co-op programs (University of Waterloo).<sup>205</sup> Furthermore, Waterloo University offers the Enterprise Co-Op program where students obtain support (advice of experienced professionals and in some cases economic resources) to develop their own business.

#### *Experiences at other Tertiary Education Institutions*

Sandwich programs may have existed in the United Kingdom since 1840, and in 1906 the first cooperative education program was launched at the University of Cincinnati in the United States. It was followed by the University of Waterloo where a co-op program was founded in 1957. Other institutions with cooperative education programs include:

The Florida Institute of Technology which offers the most condensed cooperative education program ("ProTrack") allowing engineering students to graduate in four years with three semester work terms.

Drexel University in Philadelphia, PA, and the Northeastern University in Boston, MA, have two of the largest cooperative education programs in the United States. A student graduating with a five-year degree usually had a total of 18 months of internship work at up to three different companies.

Steinbeis Center of Management and Technology of Steinbeis University, Berlin, offers an international master’s program (Master of Business Engineering) that integrates work and academic learning.

Source: The World Association for Cooperative Education (WACE); The National Commission for Cooperative Education; StudyinCanada.com; University of Waterloo, Canada; and The National Center for Tertiary Teaching Excellence, New Zealand.

It is often assumed that efforts to bring universities closer to industry apply only to engineering and applied science programs, not to the social sciences and humanities. But in reality, it is more a matter of mindset than academic discipline. A cooperative program could be set up for a history degree, for instance, whereby students would alternate between formal periods of learning at the university and periods of study/research while attached to a museum or a cultural center, or to a company in the creative industries.

<sup>203</sup>The National Commission for Cooperative Education (NCCE) is dedicated to advancing cooperative education throughout the United States. At: <http://www.co-op.edu/aboutcoop2.html>.

<sup>204</sup> StudyinCanada.com. "University of Waterloo." At: <http://www.studyincanada.com/english/schools/profile.asp?SchoolCode=uwatl08&ProfileType=University&URL=index>.

<sup>205</sup> University of Waterloo, Canada. "Co-op at Waterloo". At: <http://findoutmore.uwaterloo.ca/coop/>.

Incorporating training for entrepreneurship into regular university programs can also help bring them closer to the productive sectors, thereby boosting their ability to nurture young entrepreneurs. Olin College of Engineering in the United States is one of the most innovative institutions in that respect (Box 21).

**Box 21. Innovation and Entrepreneurship at Olin College of Engineering**

Franklin W. Olin College of Engineering, a young private university located in Wellesley, MA, is one of the best examples of an institution embodying the radical transformation that interactive, collaborative, and experiential learning call for. Olin College opened its doors in 1999 with an audacious charter: offering an experimental laboratory for remaking engineering education. Starting from the observation that STEM education is in crisis in the United States because it fails to attract the right students, because it is teaching the wrong curriculum, and because it is using methods that are known to be largely ineffective, the main purpose of Olin is to train the engineer of the 21st century, “a person who envisions what has never been and does whatever it takes to make it happen.”

Olin College operates with several innovative features. In order to identify future innovators and leaders, it recruits its students not primarily on the basis of their SAT test scores but through face-to-face interviews in multiple settings, including team exercises. Learning is organized around project-based activities performed by students working in teams. Olin College has no academic departments and does not offer tenure to its faculty members, resulting in an academic culture emphasizing interdisciplinary learning and educational innovation. A typical program will involve several teachers from different disciplines providing integrated courses with interdisciplinary material. The curriculum combines engineering, entrepreneurship, and humanities in a unique way. Every Olin student must complete a year-long senior design project sponsored by industry. The students must also acquire leadership and ethical competencies through social sciences and humanities courses. To ensure that all Olin graduates are successful at communication in a professional setting, every student is required to present some aspect of their academic work in a public setting at the end of every semester.

Fifteen years after the project was launched, Olin College can boast impressive results. Based on a survey of 130,000 students, Princeton Review placed Olin in the top 20 in 15 categories, including number 3 for students studying the most, and number 19 for the happiest students in the nation. The testimony of a typical Olin student reflecting on the learning culture of the college would be, “I’ve never worked this hard in my life and there’s nothing else I’d rather be doing.” Olin graduates have outstanding career opportunities. According to a recent survey, 97 percent of Olin alumni were either employed—in a company or in a business they started themselves - or attending graduate school (22 percent of those at Harvard, Stanford, or MIT). Companies sponsoring senior year projects often recruit the students involved as permanent employees after they graduate.

Source: Buderl (2014).

The Government of Moldova should consider putting strongly in place, as a matter of priority, a labor market observatory tasked with collecting and analyzing the employment results of all graduates. This would provide prospective students, university leaders, and employers with relevant information about labor market trends, employment characteristics of graduates, and changes in occupations. In putting in place such an observatory, Moldova would follow the example of the many OECD countries that have employment observatories. These can be operated at different levels: (i) at the supra-national level, (for example, the European Union employment observatory); (ii) at the national level, (for example: the Bureau of Labor Statistics in the United States; the Destination of Leavers from Higher Education Survey in the United Kingdom; and the university-based survey at the AlmaLaurea observatory in Italy); and (iii) at the subnational level, (for example, the Learning and Skills Observatory in Wales, Observatoire

régional emploi formation (OREF) in France, and the Education-Employment Information System in Florida). An example from Bulgaria is worth mentioning in this context.

Since 2012, the Bulgarian government has published detailed data on the labor market results of university graduates. Using data from the Registry of Tertiary Students and statistics from the National Social Security administration, the Ministry of Education was able to provide a wealth of information on the types of jobs and levels of remuneration of graduates who left the university in the previous five years. The database indicates, for instance, whether the graduate found a job, if the position corresponds to the field and level of study, what type of employer she/he is working with, if the graduate has a permanent or temporary job, and the level of salary based on social security contributions.

Observers have also suggested that big data could be used effectively to map out future labor market needs and to influence the shaping of curriculum and pedagogy. The city of Manchester, for instance, has tried to chart the competencies, skills, and attributes in demand in the Greater Manchester area by analyzing 600,000 LinkedIn profiles of people working in the region.

A recent OECD report documented good practices to enhance the labor market relevance of higher education institutions (Table 14).

**Table 14. Good Practices to Increase the Relevance of Higher Education Programs**

Practices	Labour market relevance and outcomes of higher education
Use of labour market relevant information by institutions to select programmes to offer and to inform curriculum design	Helps ensure students are enrolling in programmes that are more likely to lead to good labour market outcomes. Helps ensure students are developing skills that are valued in the labour market.
Provision of labour market relevant information by institutions to help prospective students make informed choices about field of study	Guides students' choice of study towards programmes with positive labour market outcomes and/or learning processes better aligned with a student's abilities and aspirations.
Student admission procedures to help ensure students are better prepared for higher education and well matched with their programmes	Helps ensure students have the baseline skills needed to succeed in their study programme and develop a good understanding of knowledge and skills related to the field of study. Increases completion of higher education.
Academic support for students to develop work-relevant skills and for those who are less well prepared to succeed in higher education	Helps ensure students succeed in their programmes, complete their studies and gain qualifications.
Innovative learning and teaching	Develops professional and transversal skills that support good labour market outcomes for higher education graduates.
Internationalisation of the curriculum and student mobility	Develops transversal skills, including knowledge of other societies, languages, cultures and business methods, resilience, and cross-cultural competencies and sensitivities.
Extracurricular activities on campus	Develops transversal skills, including leadership, communication and teamwork.
Career guidance for students close to graduation (and graduates)	Facilitates student's transition to the labour market.

Source: OECD, 2017

To make their research activities more relevant, the leading Moldovan universities must strengthen their capacity to engage with the local economy and support the national and regional innovation system. In that manner, they can play a critical role as one of the key pillars of the country's innovation strategy. Indeed, the presence of strong universities is important to regional development through both direct linkages and spillover effects. The successful experiences of technology-intensive poles such as Silicon Valley in California, Bangalore in India's Karnataka State, Shanghai in China, and Campinas in São Paulo State, Brazil, attest to the positive effects that the clustering of advanced human capital alongside leading technology firms can have. Box 22 contrasts the different experiences of Oxford and Cambridge in the development of linkages between the university and the local economy.

### Box 22. Creating Dynamic Clusters: The Cambridge Model

The top two British universities, Oxford and Cambridge, are more than 800 years old. They share a similar history and stem from the same academic culture. They are both considered among the best universities in the world. And yet, when it comes to the impact on their respective city, Oxford and Cambridge have followed divergent paths and achieved strikingly different results. Oxford remains an old-fashioned university city, whereas Cambridge has become the “most exciting technology cluster in Europe.” What begun in the 1970s with the creation of business parks to welcome entrepreneurial academics and their doctoral students has evolved into a hub of 4,000 knowledge-intensive firms in electronics, pharmaceuticals, biotechnology and other frontier domains. It is today the most dynamic place in Europe where professors, Nobel Prize scientists and angel investors plot their next startup.

With a productivity level 30 percent higher than London’s, Cambridge generates more patents than its next six British rivals taken together, it hosts more billion-dollar firms than cities ten times bigger, and it boasts near full employment.

The secret to Cambridge’s success seems to lie in a balanced approach combining enlightened policies to provide the right infrastructure and economic environment and a laissez-faire attitude that trusts human ingenuity and serendipity. On the one hand, the university, the city council, and the neighboring authorities have worked in a coordinated way to create a favorable ecosystem by setting up science parks and incubators, encouraging the development of business and housing estates, attracting investors, and lobbying the government for more open immigration policies. On the other hand, they have kept away from imposing strategic priorities and micromanaging the city’s economic development. The city does not decide what type of high-tech industry is more likely to become tomorrow’s industry, and the university gives incentives to academics interested in setting-up companies, making the membrane between its laboratories and private firms as porous as possible. This has resulted in dynamic partnerships where firms provide advice free of charge and invite students to help them, while academics and angel investors work together to chaperon new companies.

Unlike many universities in the United Kingdom that still work in silos, Cambridge University has been particularly good at stimulating collaboration across academic disciplines. As explained by Jeremy Sanders, one of Cambridge University’s Pro-Vice-Chancellors, the university’s philosophy is to “hire people smarter than you, give them as much freedom and research funding as possible, stand back, and reap the harvest 10 years later.”

Source: The Economist (2015).

In addition to contributing to the local economy through salaries and the purchase of goods and services, universities can be essential economic agents through relevant applied research and the training of highly qualified professionals who can help make the local firms more innovative and productive. The universities can fulfill this role in several ways, not only by participating in new innovations, but perhaps even more importantly by facilitating technology upgrade and absorption. Thus, by setting up their own incubators or linking-up closely with the industrial parks under development, the strongest Moldovan universities could contribute innovative ways of producing goods and services. This would require systematic efforts to undertake industry-oriented research and seek opportunities for technology commercializing.

Conducting research that results in patents and licenses that allow firms to make new products and develop new lines of business is important, but it is not the only manner in which technology transfer can take place. Firm-strengthening ideas pass between the academic world and companies through other forms of collaboration.

The contribution of Moldovan universities to technology upgrade and absorption can best be achieved in two ways. First, involving employers in curriculum design and having them take on students as interns strongly increases the probability that firms will employ qualified graduates. These graduates, in turn, will be agents of technology transfer, bringing new techniques and know-how to firms, especially small and middle ones. At the end of the day, the best conduit for moving ideas back and forth between universities and firms is through the students and graduates themselves.

Second, by opening their doors to firm representatives and organizing technology information and diffusion events, the universities can act as knowledge-exchange platforms which, despite the often informal character of interaction between academics and industry people, can have a significant technology-transfer influence on industry and services.

In supporting the transformation of the existing economic sectors and the creation of new ones, the contribution of universities can take several forms. Table 15 provides a summary description of the principal modalities of collaboration on knowledge transfer and technology commercialization that Moldovan universities could consider developing. It also indicates what role the national and local authorities must play to facilitate these collaborations.

**Table 15. Most Effective Knowledge- and Technology-Transfer Mechanisms**

<b>University-Industry Linkages</b>	<b>Role of National and/or Local Authorities</b>	<b>Comments</b>
<i>Public space function for networking and dissemination</i>	Develop and fund programs to create and support clusters	With education and training, this function is seen by firms as the most important contribution of universities
<i>Human capital formation (students and firm employees)</i>	Priority setting and incentives for establishment of new programs Targeted scholarships Funding and tax incentives to facilitate insertion of PhD graduates	Primary role of universities in support of innovation
<i>Research</i>	Matching grants Criteria for evaluating the performance of researchers Support for cluster formation	Increased returns at the intersection of traditional disciplines
<i>Problem-solving and consulting</i>	Targeted assistance to SMEs	
<i>Sharing of technical infrastructure</i>	Funding	Need for clear revenue sharing arrangements within universities
<i>Knowledge commercialization</i>	Appropriate Intellectual Property Right legal framework	More likely to happen in biotechnology,

	Technical assistance Financial autonomy of public universities	nanotechnology, materials and IT	new
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Source: Elaborated by Jamil Salmi

## Sustainable financing strategy for higher education

### *Resource mobilization*

At the national level, the Government of Moldova should allocate an appropriate amount of resources to higher education based on educational performance. This would allow the use of incentives for promoting innovation, eliminating poor quality programs, and encouraging institutions to merge to achieve overall consolidation of the system. This, in turn, would bring about a more rational use of existing resources.

Similarly, at the institutional level, the Moldovan universities should pursue an active income diversification strategy. This would require systematically looking at opportunities to complement the budgetary resources provided by the government and the tuition fees paid by the students who do not benefit from state education grants. This can be achieved through (i) continuing education, (ii) research and consulting contracts with the economic actors, and (iii) fund-raising.

Continuing Education. In countries that seek to make lifelong learning a reality, universities have significant opportunities for raising revenues through continuing education and executive education programs. The rapid development of the digital labor market, commonly described as the fourth industrial revolution, implies that lifelong education has become indispensable to offer avenues for training, retraining, and upskilling.

Contract research and consultations. The Moldovan universities involved in research must put in place proper incentives to induce its most active faculty members to seek consulting opportunities with local authorities, firms, and other organizations. The main purposes would not only be to generate additional income *per se* but also to apply the results of their research work in the search of innovative solutions to address national and local development needs. Along the same lines, university management ought to encourage its faculty members to seek concrete applications to their academic work that could result in the sale of goods or services produced by the universities.

Donations. Notwithstanding the lack of philanthropic tradition in Moldova, the potential for fund raising through donations is great. The country's universities have thousands of graduates, some of whom have become successful professionals both within Moldova and as members of the Moldovan diaspora living abroad. The challenge is to convince them to make generous contributions to their *alma mater*. Indeed, fund raising is not an easy task. It takes time, resources, and imagination. But the experience of universities in other countries that do not have any tradition of making gifts to educational institutions clearly shows that significant levels of donations can be captured over time from alumni, their families, and philanthropists more generally. Box 23 summarizes the experience with fund raising in Europe, where universities are new to fund-raising, with the exception of British universities. It summarizes the income diversification sources that universities and colleges rely on worldwide as a framework that Moldovan institutions could use for identifying possible funding sources.

It is clear that the small size of the Moldovan economy places additional constraints on its higher education system. In particular, opportunities for mobilization of public resources and income diversification are more limited than in larger countries. This makes it even more imperative to allocate resources efficiently. The next section reviews what mechanisms are most appropriate to achieve this outcome.

**Box 23. Lessons from Fund-Raising Efforts in Europe**

A 2011 European Commission survey on the fund-raising efforts of European universities found that success was related to three main factors. The first is what is defined as institutional privilege, that is, the wealth and reputation of the university, as well as preexisting relationships with potential donors. The second is the level of commitment of senior academic leaders and other research staff in this regard. The third and final factor has to do with the environment of a university, namely its location and the geo-political context in which it operates.

With regards to the type of donors, the survey showed that European universities raise money mostly from private corporations, while contributions from alumni are much less frequent.

Experience indicates that successful fund-raising involves the following dimensions:

Commitment of management and governing bodies;

Full participation of academic staff;

Financial and human investment in fund-raising activities;

Rewards for staff successful in attracting philanthropic donations;

Production and dissemination of materials for fund-raising purposes, such as a website, leaflets, and brochures;

Use of a database to maintain and update records on interactions with donors; and

Reporting on philanthropy in universities' annual financial reports

One of the successful cases of effective fund-raising efforts came from the United Kingdom, where a government-sponsored matching funding scheme was set up in 2008, following similar positive experiences in Singapore and Hong Kong. Between 2008 and 2011, the government matched any eligible gift made to a participating tertiary education institution.

Sources: European Commission, *Giving in Evidence: Fundraising from Philanthropy in European Universities* (Brussels, 2011).

<http://ec.europa.eu/research/era/docs/en/fundraising-from-philanthropy.pdf>.

Universities UK, "Information for Members: Formal Launch of the Matched Funding Scheme for English HE institutions," *Investor in People*, April 3, London, (2008)

**Resource allocation**

There is no objective and transparent formula determining the annual budget allocation to individual universities. While apparently related to the assignment of state-funded student places, as explained earlier, no approved and publicly available methodology is available highlighting how decisions on the annual budget allocation to public universities are made.<sup>206</sup>

An additional serious limitation of the prevailing allocation model is that it does not link resources to performance in any way. This means that the universities are not bound by any results targets, and

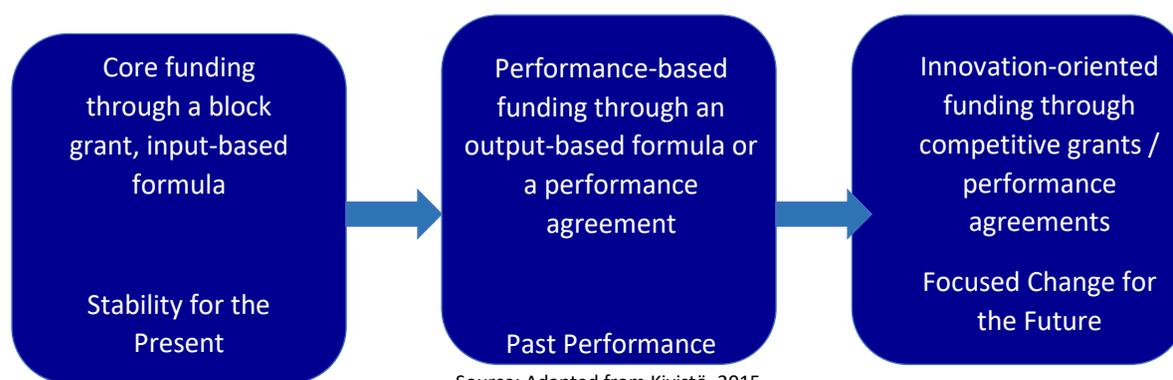
<sup>206</sup> <http://documents.worldbank.org/curated/en/897081523894080457/Moldova-Education-sector-public-expenditure-review-selected-issues>

therefore have no incentive to pursue new initiatives and become more innovative. This is a problem not only for the universities. From the government's viewpoint, the main drawback of the present funding approach is that the Ministry of Education, Culture and Research has little leverage to orient and stimulate the evolution of the public universities according to national policy objectives for the higher education system that would be aligned with the country's economic and social development goals.

Aware of the limitations of the present funding approach, the government has designed a new funding formula that has not yet been implemented. The proposed approach takes its inspiration from the state-of-the-art three-pillar models that a growing number of OECD countries have put in place in the past decade. These nations have realized that it is difficult, if not unadvisable, to rely on a single funding instrument because of the diversity of missions and financial needs of higher education institutions.

Under this multiple-instrument approach, the first pillar is meant to provide the core funding of higher education institutions. This can be achieved through an input-based funding formula with differential weights for undergraduate and postgraduate students and for various disciplines. The second pillar focuses on performance, though an output-based formula or a performance contract. Finally, the third pillar promotes innovative projects through competitive grants or performance agreements. Countries that have moved to a three-pillar model, such as Finland, generally allocate from 70 to 80 percent of the total budget through pillar one, from 10 to 20 percent through pillar two, and up to 10 percent through pillar three. Figure 77 provides a visual representation of the three-pillar funding model.

**Figure 77. Generic Three-Pillar Funding Model**



Source: Adapted from Kivistö, 2015.

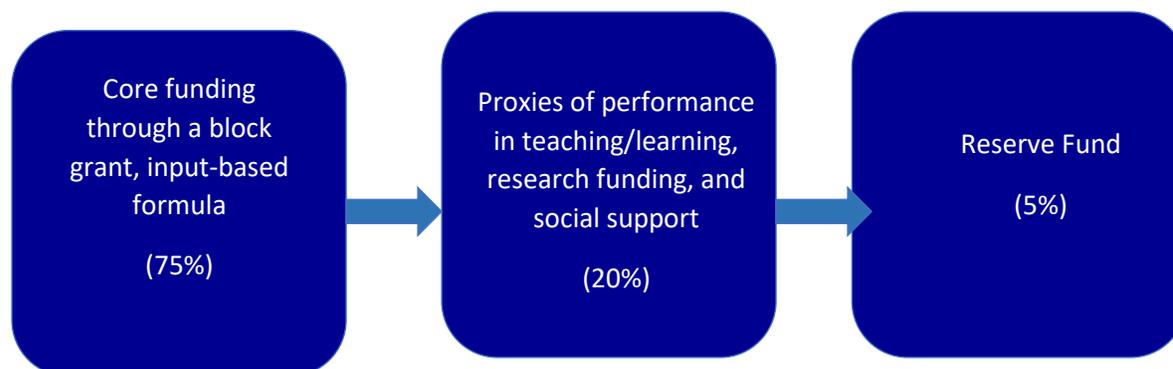
The model proposed by the Moldovan authorities presents both similarities and differences with the above-described approach (Figure 78). The first pillar, which would provide 75 percent of the recurrent funding, would also be based on a formula linked to the number of students, with differential allocations, depending on their respective costs, for six categories of programs. However, in the case of Moldova the formula would not fund all students enrolled but only those corresponding to the state order. The government may want to reconsider this for both social justice and economic efficiency reasons.

From an equity viewpoint, the distinction between state-order students and self-paying students means that, depending on their results at the end of high school, two groups of young Moldovan citizens would not receive the same level of public subsidy for their university studies. This is contrary to the practice in almost all OECD countries, as well as in Slovenia and Croatia, where all university students are eligible for public funding.

From an economic efficiency viewpoint, it is doubtful that the state can accurately plan the demand for skilled labor, as analyzed earlier. To ensure that students enroll in programs leading to meaningful employment and that higher education institutions adapt their programs to the changing needs of the

labor market as much as possible, one of the most effective tools that the Moldovan government could rely on is a well-functioning labor market observatory, as suggested in the previous section.

**Figure 78. Proposed New Funding Model in Moldova**



Source: Salmi from Ministry of Education, Culture and Research draft methodology document for the new funding model

The second pillar of the new Moldovan funding model is based on three measures of performance used as proxies for the quality of teaching and learning, research production, and social support. The indicators proposed to measure the quality of teaching and learning (ratio of master students to undergraduate students, proportion of professors supervising doctoral students, and a vague statement about quality of human resources) should be revised. While it is not easy to measure student learning outcomes, the Ministry of Education, Culture and Research would be well advised to consider graduation rates, employment outcomes of graduates, the results of employer satisfaction surveys, or the results of student satisfaction surveys as proxies of teaching and learning. Half of the amounts allocated through the Dutch funding formula, for example, is directly linked to each university's graduation rates.

Research funding obtained by each university is the proxy used to measure research performance. But instead of using a proxy, the Ministry of Education, Culture and Research could just as easily look at the actual results of research and technology transfers at the universities.

As far as social support is concerned, the proposal is to calculate the number of places available in dormitories. Assuming that out-of-town students from low-income families receive priority access to university dormitories, this would be a reasonable indicator.

Instead of using the same set of indicators for the performance-based funding pillar, the Government of Moldova could rely on performance contracts that would be better adapted to the specific circumstances and improvement goals of each university (Annex 9).

The third pillar of the funding model remains unspecified. It is described as a "reserve fund" without any explanation about the criteria for receiving funding under this rubric. The Government of Moldova may consider instead setting up a small competitive fund to support innovative projects designed by interested universities (Annex 10).

In summary, the proposed model has many positive features, especially the first pillar. The second and third pillar could be significantly improved as commented above. Two additional principles should be taken into consideration by the Ministry of Education, Culture and Research. First, the government needs to contribute a larger share of national resources to higher education. Positive incentives are needed to introduce performance-based mechanisms that would encourage universities to be more innovative and

productive (second and third pillars). Continuing with the same level of resources would defeat the purpose of the entire exercise.

Second, it would be advisable to introduce multi-year budgets, which allow higher education institutions to plan their transformation programs and investments over the medium- to long-term in accordance with their strategic plan. University leaders must have a long-term perspective to design and implement the development strategy of their institution, whether it comes to investing in new infrastructure (facilities and labs) or recruiting academic staff. Thus, it is important that the state maintain a reasonable degree of funding stability from one year to the other. This is better achieved with a multi-year budgeting process, as, for example, is the practice in Denmark, Hong Kong, and in the University of California system.

### **Conclusion: Daring to Change the Course**

The higher education system of Moldova is in crisis and it is not able to produce the relevant skills needed to support innovation and productivity increases in firms. It has lost half of its enrollment in the past decade, as a combined result of an aging population and a high level of outmigration. It is struggling to recruit young professors and to attract fee-paying students. It has never been high on the government's innovation agenda, unlike what happens in countries keen on developing their knowledge economy, such as the Nordic European countries and the East-Asian nations. The higher education system remains the only education sector that has not experienced any significant structural changes and where there is little support for reforms, unlike general education and TVET.

Moldova is therefore at a crossroads. The country can allow its higher education system to remain stagnant, or it can make bold decisions to break away from the past and undertake an audacious transformation. The first path is easy and familiar. In a "business as usual" mode, the public universities will continue to operate in their present mode, one step removed from the economy, and unable to improve their quality and relevance because of the decline in student numbers, limited financial resources, the difficulty in attracting young and promising academics, and outdated governance and management practices.

The second path is uncharted. It will require courageous policy decisions to introduce a transparent, performance-based resource-allocation mechanism, modernize the governance and management arrangements, and put in place clear accountability mechanisms. It will also necessitate the mobilization of sufficient resources to generate substantial improvements and encourage a higher quality of teaching, learning, and research across the board, to encourage curricular and pedagogical innovations, and to facilitate the emergence of one or two strong research-intensive universities. The positive transformation of the Moldovan higher education system can bring about countless rewards. Indeed, the experience of the East Asian and Nordic nations shows clearly that building a strong human capital base and producing relevant research are the best ways of supporting the national innovation system and raising the productivity of firms throughout the economy.

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## Annexes

### Annex 2: Investment Competitiveness Benchmarking

#### Summary

The goal of the analysis described in this note is to benchmark countries in terms of their competitiveness to attract FDI in specific new economic sectors or activities. The approach can be used in the context of identifying and removing binding constraints to FDI in a given sector that a country has already selected as a priority, or in the context of sector-selection work where the purpose is to identify sectors with existing potential for a positive FDI response.

The investment competitiveness benchmarking framework hypothesizes that a country needs to be competitive in terms of various characteristics, ranging from demand factors to production factors, key inputs, and the institutional context, in order to successfully attract FDI in a given sector. Country characteristics under these four pillars are measured and benchmarked through a set of 140 country level indicators from various sources, including Doing Business, World Economic Forum, World Development Indicators, International Country Risk Guide, and so forth. The intention is to capture as broad a range of country characteristics as possible, while the sector specific benchmarks reflect the relative importance – or lack of importance - of each characteristic for FDI in given sector.

#### Methodology

Sector specific benchmarks are constructed with the help of detailed project level FDI data from the Financial Times “fDi Markets” database. The relative importance of the above-mentioned characteristics for FDI in a given sector is assessed by analyzing the characteristics of all countries in the world with successful FDI attraction for the sector in question. Those characteristics for which successful countries are clustered at high performance levels are likely to be crucial for a given sector. If such clustering exists for a given characteristic, the country under analysis compares against a high benchmark, and underperformance is likely to constitute a competitive disadvantage for FDI performance in the sector in question.

“fDi Markets” classifies announced FDI projects by 38 sectors (for example, consumer products, pharmaceutical, plastics, rubber, and so forth) and 17 business activities (for example, headquarters, logistics, manufacturing, R&D, and so forth). While different assumptions are possible, in the baseline version of the methodology a country is considered “successful” if it has attracted at least one FDI project for a given sector–activity pair within the last five years. The combination of sector-activity pairs allows for comparisons of competitiveness for FDI either across different sectors for the same activity (for example manufacturing of textiles versus cars) or for within-sector analysis towards more sophisticated activities (for example textile manufacturing versus design). For export-oriented merchandise sectors, a twin-version of the tool is available that classifies “successful” countries by revealed comparative advantage in export products at the detailed ISIC four-digit level.

The methodology calculates sector benchmarking scores from 1-5 defined as follows:

- A score of 5 (dark green) for a given indicator means that the country ranks above the 30<sup>th</sup> percentile of all countries in the world that have successfully attracted FDI in a given sector. The characteristic measured by this indicator would likely be seen by investors as a strength in the country’s value proposition for investors in this sector.
- A score of 4 (light green) for a given indicator means that the country ranks above the 10<sup>th</sup> percentile but below the 30<sup>th</sup> percentile of all countries in the world that have successfully attracted FDI in a given sector. The characteristic measured by this indicator would likely not be

seen as a strength, but neither would it represent a significant obstacle to investment in this sector because other countries in the world with the same level performance have still been able to attract FDI in the sector.

- A score of 3 (yellow) for a given indicator means that the country ranks below the 10<sup>th</sup> percentile of all countries in the world that have successfully attracted FDI in this sector, but above the 90<sup>th</sup> percentile of unsuccessful countries that fall below the minimum performance of successful countries on this indicator. The characteristic measured by this indicator may be seen as a weakness by investors in this sector, but even relatively small improvements could address this shortcoming.
- A score of 2 (light red) for a given indicator means that the country ranks below the 90<sup>th</sup> percentile, but above the 70<sup>th</sup> percentile of unsuccessful countries that fall below the minimum performance of successful countries on this indicator. The characteristic measured by this indicator is likely to be seen as a weakness by investors in this sector, and significant improvements would be needed to address this shortcoming.
- A score of 1 (dark red) for a given indicator means that the country ranks below the 70<sup>th</sup> percentile of unsuccessful countries that fall below the minimum performance of successful countries on this indicator. The characteristic measured by this indicator is very likely to be seen as a strong weakness by investors in this sector, and very significant improvements would be needed to address this shortcoming.

The following section benchmarks Moldova in terms of its competitiveness to attract FDI in priority sectors included in the National FDI and Export Strategy 2016-2020.<sup>207</sup> The purpose of the ICB analysis is not to select sectors for prioritization but rather to identify Moldova's overall investment competitiveness and identify some common challenges for FDI attraction and linkages. Numerous aspects of the investment climate, ranging from available skills to macroeconomic stability, influence an investor's decision-making and attractiveness to a given country's economic sectors. To this end, the analysis benchmarks Moldova's performance on any given indicator to the performance of all other countries that have successfully attracted FDI to a given sector or business activity. It complements diagnoses of sector-specific constraints in Moldova, and thus identifies potential benefits and challenges for Moldova's FDI attraction.

The analysis is an input into the "FDI Sector Scan" exercise, which the government could conduct to update its priority sectors and subsectors for investment promotion. The scan is an analytical framework and diagnostic tool that evaluates a country's priority sectors against two criteria: (1) these sectors' ability to bring developmental benefits to the country; and (2) their attractiveness to investors. To conduct a complete scan, additional qualitative and quantitative inputs are needed, including a review of relevant literature, inputs from stakeholder interviews, and various quantitative analyses, including on national data (for example, firm-level performance data), sectoral productivity and employment data, nationally provided investment statistics, and so forth.

As an example of the ICB analysis, Figure A2.1 offers insights into the competitiveness of the food and tobacco sector, which is used as a proxy for food processing. The food processing and beverages sector is one of Moldova FDI priority sectors in the National Investment and Export Strategy 2016-2020 of the Republic of Moldova. The document states that although the sector does not presently score high in terms attractiveness, it has been one of the top export sectors in Moldova and the country has attracted some investment into this sector, although much of it was made in the era of

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<sup>207</sup> The ICB analysis is conducted considering Moldova's sector objectives and aspirations, as mentioned in the FDI strategy document. These sectors include (1) Food Processing, (2) Electronics, (3) Textiles, (4) Business Services, (4) Automotive industry, (5) Machinery and (6) Software & IT Services.

privatization. A small domestic market and fragmentation of domestic supply might prove to be barriers discouraging potential foreign investors from making investments in Moldova. Nevertheless, because of the importance of agriculture and food processing for the Moldovan economy, the sector is currently included among the priority sectors, especially for export promotion.<sup>208</sup>

The ICB input supports the assessments underpinning Moldova's strategy. It suggests that the economy is currently fairly competitive for FDI in lower value-added activities within the sector, such as retail, (which is a market-seeking sector). However, it suggests that for activities higher up the value chain, such as production of higher-value added crops, or services related to food production and distribution, or research and development, significant improvements would be needed in key areas of their investment climate. Moldova's strengths in the sector currently include geography and natural resources, which reflects its favorable location and climate making it suitable to grow varieties of fruits and vegetables on its fertile soils. However, to increase the attractiveness of the sector for FDI, significant improvements will be needed in a number of areas, including existing capabilities, labor and skills, availability of key input services (transport and finance), and rule of law and property rights. Aligned with these key areas, literature on sector-specific barriers also suggests that the sector's productivity is hampered by a number of factors, including: a declining and aging rural labor force; infrastructure deficiencies, particularly in rural areas; the limited coverage and poor condition of irrigation systems; a weak SPS framework; and a high land fragmentation which limits the possibilities to exploit economies of scale and discourages investment in mechanization.<sup>209</sup>

**Figure A2.1 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Food & Tobacco)**

	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity										
	DEMAND <small>domestic and / or global market</small>	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS			
		labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability
<b>Business Activity</b>											
Education & Training	6	16	2	15	7	7	7	5	12	7	12
Headquarters	3	10	1	14	2	7	7	2	7	6	6
Shared Services Centre	2	9	1	13	2	5	7	1	8	6	7
Research & Development	3	10	0	11	1	6	7	2	7	4	5
Design, Development & Testing	3	8	0	12	1	4	3	1	3	2	2
Logistics, Distribution & Transportation	2	3	1	4	0	3	1	0	1	1	0
Sales, Marketing & Support	2	2	0	3	0	1	0	0	1	0	1
Manufacturing	2	0	0	2	0	1	0	0	0	0	0
Retail	0	0	0	2	0	1	0	0	0	0	0

Source: MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

The current structure of the sector also reflects the existence of these barriers. Nevertheless, the potential for FDI could be explored more completely through a full FDI sector scan. The sector is composed of a few large companies specializing in the production of low value-added crops (such as cereals, oilseeds, and sugar beet), and peasant farms and households, especially subsistence and semi-subsistence farms generating a limited surplus of high value-added crops (such as fruits, nuts, grapes, vegetables, or potatoes). FDI in the sector so far has been limited. Between 2003 and 2016, there have been six recorded greenfield projects in Moldova's agricultural sectors, including one investment each in dairy products, wineries, and grains and oil seeds, along with two investments in fruits and vegetables.<sup>210</sup> Whether or not there is potential for more FDI in the sector or in certain niche areas, for example in organic farming, could be explored further through an FDI sector scan, although it appears that the binding constraints at present appear significant.

With respect to other sectors, the ICB analysis suggests that there are pockets of investment competitiveness, although these are currently concentrated primarily in low value-added activities. In

<sup>208</sup> National Investment and Export Strategy 2016-2020 of the Republic of Moldova.

<sup>209</sup> World Trade Organization (2015).

<sup>210</sup> Financial Times fDi Markets database (2018).

practice, low-value FDI typically refers to investment in simple activities, such as assembly operations, while all the parts and materials (and associated services, such as product design, financial management, and so forth) are imported, the finished goods are exported, and low-cost wages and utility supplies are the only “value” retained in the country. In the case of “electronic components”, Moldova demonstrates that it is competitive for attracting FDI into manufacturing, while in “textiles” and “business services” it is attractive for retail activities. Having said this, certain sectors already demonstrate potential strengths in areas such as design and development, and testing, such as in the IT and services sector and automotive. Results of ICB benchmarking for these sectors are included below.

While a comprehensive FDI sector scan would be required to comprehensively assess the feasibility and desirability of investment in each sector and subsector, the key finding here is that each of the currently prioritized FDI sectors can be made more attractive for FDI through reforms and targeted investment promotion. It could also help in identifying new sectors that could become attractive for FDI (such as in electronics) and FDI opportunities in higher value-added activities within existing sectors, with the objective of increasing the value that stays in the country. For example, the focus could increasingly be on activities that generate higher value-addition per worker (for example, services such as IT, KPO, and financial services); or that produce higher-value products using local inputs (for example, niche tourism, possibly organic agricultural products, and so forth); or that can produce in Moldova the parts and services needed for existing assembly operations (for example in automotive).

In addition, an important finding of the ICB analysis is that Moldova’s performance in “existing capabilities” presents the most important binding constraint for FDI attraction, but also for the transfer technology and know-how to domestic companies. Across all sectors, the ICB analysis found that Moldova performs among the lowest (10<sup>th</sup> percentile) global performers in several areas of existing capabilities. In other words, few countries in the world with Moldova’s level of performance in this area of investment competitiveness have managed to successfully attract FDI into activities within these sectors. To illustrate the specific areas of gaps, Table A2.1 provides a comparison of the relevant indicators included in the “existing capabilities” pillar of the ICB analysis for Moldova and comparator countries. There is a wide gap between Moldova and most of the countries. In particular Moldova ranks poorly on all indicators, ranging from company spending on R&D, to firm-level technology absorption.

**Table A2.1. Moldova’s Problem Areas in Existing Capabilities and Comparators (per the ICB exercise)**

Existing Capability Area	Moldova	Bulgaria	Macedonia, FYR	Slovakia	Estonia	Romania	Serbia
Production process sophistication	106	71	61	30	52	94	107
State of cluster development	134	70	55	57	73	119	100
Local supplier quality	100	65	47	32	20	63	79
Local supplier quantity	121	76	73	99	50	122	106
Prevalence of foreign ownership	120	76	95	6	9	93	77
Capacity for innovation	115	79	91	77	27	63	131

Business sophistication	120	79	75	54	45	116	110
Company spending on R&D	135	44	58	65	38	110	107
Firm-level technology absorption	106	66	67	47	20	95	117

**Source:** WEF Global Competitiveness Indicators 2017/2018 for all countries except FYR Macedonia, which is from the WEF Global Competitiveness Indicators for 2016/2017 (which covers 138 countries instead of 137). The indicator for capacity for innovation is sourced for all countries from the WEF Global Information Technology Report 2016.

As such, it would be critical for Moldova to make very significant improvements to its existing capability performance. For example, the low prevalence of foreign ownership, and the lack of local supplier quality and quantity, can be approached by targeting FDI into promising priority sectors and encouraging supplier industries to support these sectors, as well as by promoting FDI linkage policies and programs. Company spending on R&D could be addressed by targeting higher-value added FDIs and by leveraging behavioral incentives in line with international good practices, provided that these incentives would be used to address market failures inhibiting R&D.

A broader strategic implication for Moldova's development strategy is that a successful upgrading of Moldova's production will likely not succeed without FDI input in supplier industries for priority FDI sectors, which would complement and boost local capabilities. This strategy would not only help in upgrading local production, but also make Moldova more attractive for further potential FDI in knowledge-intensive business activities. At the same time, the strategy must ensure the maximization of linkages between FDI and domestic companies, a process which will succeed if it takes place gradually and in line with the needs of the market.

The following charts summarize ICB results for Moldova's FDI priority sectors. As discussed earlier, the benchmarking can serve as an analytical input to the FDI sector scan exercise which would help to identify promising sectors and activities to be included in Moldova's updated FDI Strategy, as well as reforms required to increase attractiveness in certain areas.

**Figure A2.2 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Food & Tobacco)**

Business Activity	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity										
	DEMAND domestic and / or global market	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS			
	labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability	
Education & Training	0	10	2	15	7	7	7	9	12	7	12
Headquarters	3	10	1	14	2	7	7	2	7	6	6
Shared Services Centre	2	9	1	13	2	5	7	1	8	6	7
Research & Development	3	10	0	11	1	6	4	2	7	4	5
Design, Development & Testing	3	8	0	17	1	4	3	1	3	2	2
Logistics, Distribution & Transportation	2	3	1	6	0	3	1	0	1	1	0
Sales, Marketing & Support	2	2	0	3	0	1	0	0	1	0	1
Manufacturing	2	0	0	2	0	1	0	0	0	0	0
Retail	0	0	0	2	0	1	0	0	0	0	0

**Source:** MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

**Figure A2.3 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Electronic Components)**

Business Activity	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity											
	DEMAND domestic and / or global market	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS				
	labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability		
Shared Services Centre	5	16	4	15	8	7	9	3	11	9	15	
Research & Development	4	12	0	15	7	7	7	3	11	6	8	
Retail	3	15	2	14	3	7	6	4	10	6	7	
Headquarters	4	8	0	14	4	7	7	2	9	5	8	
Logistics, Distribution & Transportation	3	8	1	14	2	6	7	1	7	6	6	
Design, Development & Testing	4	8	0	13	1	5	6	9	7	4	5	
Sales, Marketing & Support	2	2	0	3	0	1	0	0	1	0	0	
Manufacturing	0	0	0	0	0	0	0	0	0	0	0	

Source: MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

Figure A2.4 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Textiles)

Business Activity	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity											
	DEMAND domestic and / or global market	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS				
	labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability		
Design, Development & Testing	4	11	2	15	7	7	7	3	11	7	8	
Headquarters	4	10	1	15	4	7	4	2	10	7	8	
Logistics, Distribution & Transportation	3	8	0	10	0	3	3	0	3	3	3	
Sales, Marketing & Support	2	3	0	4	0	3	3	0	2	0	0	
Manufacturing	1	0	0	2	0	1	0	0	0	0	0	
Retail	0	0	0	1	0	1	0	0	0	0	0	

Source: MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

Figure A2.5 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Business Services)

Business Activity	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity											
	DEMAND domestic and / or global market	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS				
	labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability		
Logistics, Distribution & Transportation	5	20	5	16	8	8	9	7	14	9	14	
ICT & Internet Infrastructure	5	18	5	16	8	8	9	4	15	9	17	
Technical Support Centre	6	18	3	13	5	6	7	1	7	6	9	
Research & Development	6	15	0	15	9	7	6	8	11	7	17	
Retail	3	7	0	13	2	7	3	2	5	4	5	
Shared Services Centre	3	8	2	13	1	5	3	9	6	6	4	
Design, Development & Testing	3	5	0	10	1	4	4	1	5	3	2	
Headquarters	2	6	0	10	0	3	4	1	5	4	2	
Education & Training	2	4	0	7	0	3	4	0	2	2	2	
Recycling	3	2	0	6	1	4	4	0	3	1	1	
Customer Contact Centre	0	1	1	1	0	2	0	0	0	0	0	
Business Services	0	0	0	1	0	1	0	0	0	0	0	

Source: MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

Figure A2.6 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Software & IT Services)

Business Activity	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity											
	DEMAND domestic and / or global market	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS				
	labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability		
Research & Development	3	10	0	15	8	7	6	3	11	6	7	
Customer Contact Centre	4	18	1	14	2	6	4	1	9	7	7	
Shared Services Centre	2	8	1	13	2	5	4	1	7	6	4	
Education & Training	3	7	1	13	2	5	3	1	3	2	3	
ICT & Internet Infrastructure	2	6	0	10	0	3	4	0	5	3	2	
Technical Support Centre	2	7	0	11	1	4	1	0	3	2	3	
Headquarters	2	5	0	12	1	4	1	1	3	2	3	
Business Services	2	3	0	7	0	2	1	0	2	0	2	
Design, Development & Testing	1	1	0	4	0	2	1	0	1	0	0	
Sales, Marketing & Support	0	1	0	2	0	1	0	0	1	0	0	

Source: MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

Figure A2.7 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Business Machines & Equipment)

	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity										
	DEMAND domestic and / or global market	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS			
	labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability	
<b>Business Activity</b>											
Logistics, Distribution & Transportation	4	17	4	16	7	8	9	3	12	9	10
Shared Services Centre	4	14	4	16	5	8	9	2	13	9	13
Maintenance & Servicing	6	15	3	14	3	7	8	4	10	6	10
Headquarters	4	9	0	14	4	7	4	2	9	6	8
Design, Development & Testing	3	10	0	14	2	7	6	2	8	6	8
Technical Support Centre	3	10	4	10	5	7	7	2	8	2	4
Retail	3	7	1	11	2	7	4	1	5	4	2
Manufacturing	3	7	2	11	0	4	6	1	5	4	3
Sales, Marketing & Support	2	5	0	9	4	4	3	1	2	3	2

Source: MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

**Figure A2.8 Investment Competitiveness Benchmarking Results: Moldova vs. Global Comparators (Automotive OEM)**

	Benchmarking analysis relative of Moldova's performance on select indicators relative to successful countries by sector & activity										
	DEMAND domestic and / or global market	PRODUCTION FACTORS			KEY INPUTS			INSTITUTIONS			
	labor and skills	geography and natural resource	existing capabilities	energy	transport	finance (cost and availability)	regulatory barriers	rule of law and property rights	market contestability	macro and political stability	
<b>Business Activity</b>											
Customer Contact Centre	5	20	5	16	8	8	9	7	14	9	14
Research & Development	4	20	4	16	8	8	9	6	15	9	12
Recycling	6	16	2	15	7	7	7	5	12	7	12
Logistics, Distribution & Transportation	3	9	2	14	2	4	7	1	8	6	4
Headquarters	3	7	1	12	2	6	7	2	7	5	5
Education & Training	2	8	2	14	1	6	6	1	7	6	5
Design, Development & Testing	3	9	1	10	0	3	3	0	3	3	3
Retail	3	2	0	3	0	1	1	0	1	1	3
Sales, Marketing & Support	2	2	0	3	0	1	1	0	1	1	2
Maintenance & Servicing	2	1	0	2	0	1	1	0	1	1	1
Manufacturing	2	0	0	2	0	1	0	0	0	0	0

Source: MTI Investment Competitiveness Benchmarking tool, World Bank Staff own calculations based on various global indicator sources & Financial Times, fDi Markets database, 2017.

### Annex 3. List of Investment Incentives Applicable Also to Foreign Investors

Incentive	Eligible Business	Legal Base	Administrative Guidelines
<b>Reduced base of taxable income</b>	Businesses expanding workforce		
<b>Reduced base of taxable income</b>	Businesses covering staff transportation and food costs	Art. 24 of the Tax Code	Government Regulation No. 144 of 26/02/2014
<b>Reduced base of taxable income</b>	Businesses covering staff training costs	Art. 24 of the Tax Code	Government Regulation No. 144 of 26/02/2014
<b>0% CIT rate</b>	Banks and microfinance businesses for income from loans granted for longer than 3 years	Law on Enforcement of the Fiscal Code, No. 1164-XIII of 24/04/1997	Government Regulation No. 1390 of 24/11/2003
<b>50% CIT exemption</b>	Banks and micro-finance businesses for income from loans granted for 2- 3 years	Law on Enforcement of the Fiscal Code, No. 1164-XIII of 24/04/1997	Government Regulation No. 1390 of 24/11/2003
<b>Matching grants (up to 30% of the financed amount)</b>	Businesses that invested in energy efficiency measures	Decree on Energy Efficiency Fund No. 401 of 12/06/2012	
<b>State guarantee for</b>	Businesses that invested in energy efficiency	Decree on Energy Efficiency Fund No. 401	

<b>loans</b>	measures	of 12/06/2012	
<b>Reduced base for income tax on salaries</b>	Employees in the ICT sector	Law on Enforcement of the Fiscal Code 1164-XIII of 24/04/1997, Art. 24/19	Unclear (requirements listed by MIEPO are not found in the Law and no associated Decree is listed)
<b>Deferral of VAT and customs duty on imported raw materials for up to 180 days</b>	Export manufacturers listed by the Government	Law on Enforcement of the Fiscal Code, No. r. 1417 or 17.12.1997, Art. 4/20; Customs Code No. 1149-XIV of 20 July 2000 (Art. 126 para. (3 <sup>2</sup> ) art.127 <sup>1</sup> ) Fiscal Code No. 1163-XIII of 24 April 1997 (Article 49(a))	Government Decree No. 146 of 26/02/2014
<b>50% of the statutory CIT rate</b>	On income from exports in Free Zones	Fiscal Code No. 1163-XIII of 24 April 1997 (Article 49(a)) Fiscal Code No. 1163-XIII of 24 April 1997 (Article 49(a))	
<b>75% of the statutory CIT rate</b>	On income from non-exports in Free Zones	Fiscal Code No. 1163-XIII of 24 April 1997 (Article 49(a))	
<b>0% CIT rate for 3 years</b>	On income from exports in Free Zone who invested \$1m	Law No. 440 of 27 July 2001 on free economic zones (Art. 8)	
<b>0% CIT rate for 5 years</b>	On income from exports in Free Zones who invested \$5m	Law No. 440 of 27 July 2001 on free economic zones (Art. 8)	
<b>Customs duty exemptions</b>	Imports of Free Zone residents incorporated into exports	Customs Code No. 1149 of 20.07.2000 (Article 91(1))	
<b>VAT exemptions</b>	Imports to the Zones, domestic supplies to the Zones and supplies among Zones, as well as exports from the Zones	Imports to the Zones, domestic supplies to the Zones and supplies among Zones, as well as exports from the Zones	
<b>Waiver charges to change land destination</b>	Developer of Industrial Parks	Law No. 182 of 15 July 2010 on industrial parks	Government Decree No. 652 of 01.09.2011
<b>Preferential price for state-owned land to the</b>	Operator of an Industrial Park	Law No. 182 of 15 July 2010 on industrial parks	Government Decree No. 652 of 01.09.2011

<b>park management</b>			
<b>30% rent reduction for state-owned land</b>	Businesses in Industrial Parks	Law No. 182 of 15 July 2010 on industrial parks	Government Decree No. 652 of 01.09.2011
<b>Reduced state inspection fees</b>	Businesses in Industrial Parks	Law No. 182 of 15 July 2010 on industrial parks	Government Decree No. 652 of 01.09.2011
<b>Regulatory support</b>	Businesses in Industrial Parks	Law No. 182 of 15 July 2010 on industrial parks	Government Decree No. 652 of 01.09.2011
<b>25% CIT rate for 10 years</b>	Residents in the G. International Free Port	Law on Giurgiulesti Free International Port No. 8-XV of 17 February 2005 (Art. 8, para. 2 (b))	Government Decree No. 721 of 18.07.2005
<b>50% CIT rate</b>	Residents in the G. International Free Port	Law on Giurgiulesti Free International Port No. 8-XV of 17 February 2005 (Art. 8, para. 2 (b))	Government Decree No. 721 of 18.07.2005
<b>0% CIT rate</b>	Residents in the G International Free Port that invested at least \$5m	Law on Giurgiulesti Free International Port No. 8-XV of 17 February 2005 (Art. 8, para. 2 (b))	Government Decree No. 721 of 18.07.2005
<b>Customs duty exemption</b>	Residents in the G. International Free Port for imported capital goods and oil products	Law on Giurgiulesti Free International Port No. 8-XV of 17 February 2005 (Art. 8, para. 2 (b))	Government Decree No. 721 of 18.07.2005
<b>VAT exemption</b>	Residents in the G. International Free Port for capital investments	Law on Giurgiulesti Free International Port No. 8-XV of 17 February 2005 (Art. 8, para. 2 (b))	Government Decree No. 721 of 18.07.2005

#### Annex 4. Competition and Growth

Empirical evidence strongly supports the positive effects of antitrust enforcement on productivity growth.<sup>211</sup> Tough enforcement against the practices of cartels, based on well-designed anticartel laws, for example, constitutes an effective tool to reduce negative impact of anticompetitive behavior.<sup>212</sup> Price-fixing agreements among competitors impose significant costs on society. Connor (2010) examines studies and judicial decisions in 381 cartelized markets worldwide and estimates a long-run median overcharge of 23.3 percent of prices above competitive levels.<sup>213</sup> Estimations from the European Commission (2008) suggest that average productivity would fall by 13 percent in the presence of market sharing cartel agreements among member states. Apart from increasing the cost of goods and services

<sup>211</sup> S. Voigt, "The Effects of Competition Policy on Development: Cross-Country Evidence Using Four New Indicators." *Journal of Development Studies* 45, no. 8 (2009): 1225–48; Buccirossi et al., *Competition Policy and Productivity Growth: An Empirical Assessment* (WZB Working Paper No. SP II, 2009), 12.

<sup>212</sup> See G. Symeonidis, "The Effect of Competition on Wages and Productivity: Evidence from the UK," *Review of Economics and Statistics* 90 no. 1 (2008): 134–46; Barbara Alexander, "The Impact of the National Industrial Recovery Act on Cartel Formation and Maintenance Costs," *Review of Economics and Statistics*, 76 no. 2 (1994): 245–54.

<sup>213</sup> John M. Connor, *Price Fixing Overcharges: Revised 2nd Edition* (2010)

to conduct business, cartels are also associated with low labor productivity and reduced incentives to innovate.<sup>214</sup> International experience shows that the introduction of comprehensive national competition policies can bring substantial economic gains. Estimates suggest that competition policy reforms during the 1990s boosted Australia's GDP by at least 2.5 percent or US\$20 billion due to their effect on increased productivity and lower prices.<sup>215</sup>

By fostering productivity growth, competition can leverage the private sector to promote continued social progress and shared prosperity.<sup>216</sup> Effective competition creates the incentives for provision of goods and services at relatively lower prices and better quality, facilitating the access of high-quality and affordable goods and services by both companies and final consumers. Sustainable growth through expansion of markets, increased private participation, and productivity growth cascades into increased prosperity and opportunities, allowing consumers to access a wide variety of well-priced quality products, increasing welfare, and providing sustainable opportunities for job creation.<sup>217</sup> Competitive markets are also key to expanding the positive effects of other policies such as trade openness and investment incentives.

### Annex 5. Price Cost Margin and Labor Productivity: Key Methodological Considerations

Following the standard in the literature, market power is proxied using the price–cost margin (PCM), which is derived from the Lerner Index. The PCM measures margins (that is, the difference between price and marginal cost) as a proportion of price. In the absence of information on price and marginal cost, the extent of pricing power in an industry can be proxied in two different ways. The first is defined as the difference between value added and labor costs as a proportion of sales (all measured in current prices), as follows:

$$PCM_{it} = \frac{(valueadded_{it} - labor\_cost_{it})}{sales_{it}}$$

For firm  $i$ , at time  $t$ , where value added, sales and labor costs are all taken from the Business Structural Survey. An alternative measure, applied here to assess results robustness, is defined as  $PCM_{it} = \frac{(profit_{it})}{sales_{it}}$ , where profit figures at the firm level are taken from the same survey.

Following Aghion et al. (2008), the specification (1) is applied

$$\Delta \ln LP_{ijt} = \alpha + \beta PCM_{t-1} + \vartheta_i + \partial_j + \rho_t \quad (1)$$

where the left hand side variable represents labor productivity growth of firm  $i$  in 4 digit sector/product market  $j$  at year  $t$ ,  $\mu_{t-1}$  is the lagged value of firm PCM  $i$  in sector  $j$  at year  $t-1$ , while  $\vartheta_i$ ,  $\partial_j$  and  $\rho_t$  represent firm, market/sector and year fixed effects, respectively.<sup>218</sup> The observations are not assumed to be independent within each 4-digit (product) market, so errors are clustered at the 4-digit (product) market level.

Source: WBG Markets and Competition Policy team.

<sup>214</sup> See S. J. Evenett, M. C. Levenstein, and V. Y. Suslow, "International Cartel Enforcement: Lessons from the 1990s" (*World Economy* 24 (2001): 1221–1245; George Symeonidis, "In Which Industries is Collusion More Likely? Evidence from the UK" (*Journal of Industrial Economics*, Wiley Blackwell, vol. 51, no. 1 (2003): 45–74.

<sup>215</sup> Australian Government, Productivity Commission Inquiry Report (2005). Review of National Competition Policy Reforms, available at <http://ncp.ncc.gov.au/docs/PC%20report%202005.pdf>

<sup>216</sup> For a series of competition reforms that have positively affected the economy, see: Kitzmuller M. and M. Licetti, "Competition Policy: Encouraging Thriving Markets for Development" Viewpoint Note Number 331, World Bank Group, August 2012.

<sup>217</sup> See World Bank, *A Step Ahead: Competition Policy for shared Prosperity and Inclusive Growth*. Washington, DC: 2017).

<sup>218</sup> Using contemporaneous values of the measures to evaluate the relationship between market power and productivity growth could be problematic, as higher PCMs could be the result, rather than a cause, of innovation and changes in productivity growth. Similarly, the cost advantage gained from innovation could translate into higher PCMs. To address this problem, PCM variable is lagged.

Annex 6. Table: Sectors and Subsectors with SOE Presence (2018)

National, state, regional or provincial governments control at least one firm in the following sectors:		Market share of the largest SOE	Shares owned by the gov. in the largest SOE	Nonexhaustive list of SOEs in the sector: JSC (joint stock companies controlled by the government), I.S (central public enterprises) and I.M. (local public enterprises)	Presence of private players
Network / Infrastructure in which economic regulation is necessary (incl. market segments with natural monopoly characteristics)					
1	Water transportation infrastructure (ports/terminals)***	50% < x < 90%	100%	I.S. "Portul Fluvial Ungheni"	Yes
2	Road infrastructure	> 90%	100%	I.S. "Administratia de Stat a Drumurilor"	No
3	Rail Infrastructure*	> 90%	100%	I.S. "Calea Ferata din Moldova"	No
4	Electricity Transmission	> 90%	100%	I.S. "Moldelectrica"	No
5	Telecom backbone infrastructure	> 90%	100%	JSC "MOLDTELECOM"	No
6	Water collection, treatment and supply	> 90%	100%	20 + companies (several local)	No
Sectors in which private sector normally provides for services under pro-competition market regulation					
7	Air transport services - international passenger/cargo transport	50% < x < 90%	100%	JSC "Air Moldova"; I.S. "Moldaeroservice"	Yes
8	Electricity Distribution	50% < x < 90%	100%	JSC Retelele Electrice de Distributie Nor-Vest; JSC Retelele Electrice de Distributie Nord	No
9	Electricity Generation	< 50%	100%	JSC Termoelectrica; JSC "CET Nord" Bălți; The CHE Costești	Yes
10	Electricity Import	50% < x < 90%	100%	JSC Energocom	Yes
11	Electricity Retail	< 50%	100%	JSC "Furnizare Energie Electrica Nord"	Yes
12	Rail Freight services*	> 90%	100%	I.S. "Calea Ferata din Moldova"	No
13	Rail Passenger services*	> 90%	100%	I.S. "Calea Ferata din Moldova"	No
14	Telecom Fixed line	> 90%	100%	JSC "MOLDTELECOM"	No
15	Telecom Mobile services	< 50%	100%	JSC "MOLDTELECOM"	Yes
16	Telecom Internet services	50% < x < 90%	100%	JSC "MOLDTELECOM"	Yes
17	Water Freight services	< 50%	100%	I.S. "Portul Fluvial Ungheni"	Yes
18	Post - basic letter services*	> 90%	100%	I.S. "Posta Moldovei"	No
19	Post - basic parcel services*	> 90%	100%	I.S. "Posta Moldovei"	No
20	Post - courier services	< 50%	100%	I.S. "Posta Moldovei"	Yes
21	Other urban, suburban and interurban passenger transport	50% < x < 90%	100%	IM "Regia transport electric" (Chisinau); IM "Orhei Transport" (Orhei); Î.S. Gările și Stațiile Auto;	Yes
Sectors in which private sector normally provide for services under unregulated market competition					
22	Accommodation, food and beverage service activities (hotels, restaurants)	< 50%	100%	I.S. HOTELUL "ZAREA"; S.A. "Hotelul "Chisinau"; IM "Hotelul Balti"; IM Hotelul "Codru"; I.S. "CRIZANTEMA"	Yes
23	Gambling and betting activities*	> 90%	100%	JSC Loteria Moldovei	No
24	Education**	N/A	N/A	-	Yes
25	Human health activities**	N/A	N/A	Most hospitals in the country	Yes

26	Motion picture distribution and projection	N/A	100%	JSC "MOLDOVA-FILM"; JSC "Moldcinema"; I.S."Gaudeamus-Cinema"; I.S. Studioul "Arta-Cinema"	Yes
27	Waste Management / Scrapping	50% < x < 90%	78%	JSC Metalferos	Yes
28	Agriculture	< 50%	100%	I.S SERELE DIN CHIȘINĂU;	Yes
29	News and media (magazines); printing	N/A	100%	I.S."Combinatul Poligrafic"; I.S."Agentia Informationala de stat "Moldpres"	Yes
30	Radio/TV broadcasting	< 50%	100%	I.S."Radiocomunicatii"; I.S."Centrul National pentru Frecvente Radio"	Yes
31	Construction	< 50%	100%	JSC "DRUMURI-CAHUL"; I.S.de constructii a Caili Ferate "Confercai"; I.S."Directia pentru exploatarea imobilului"	Yes
32	Retail trade	< 50%	100%	I.S.Firma Comerciala de Intermediere "Mold-Didactica"	Yes
33	Real estate	N/A	N/A	IM "Directia Gospodariei Locativ-Comunale"	Yes
<b>Manufacturing</b>					
34	Manufacture of basic metals	N/A	78%	JSC Metalferos	Yes
35	Manufacture of fabricated metal products, machinery and equipment	N/A	78%	JSC Metalferos; JSC Tracom	Yes
36	Manufacture of pharmaceuticals	< 50%	100%	Sanfarm Prim JSC	Yes
37	Manufacture of railway and tramway locomotives and rolling stock*	100%	100%	I.S. Calea Ferata din Moldova	No
38	Manufacture of tobacco products	50% < x < 90%	91%	JSC "Tobacco Fermentation Plant in Orhei"; JSC "Tutun-CTC"	Yes
39	Manufacture of food (wheat flour, Bread, cakes, pasta)	< 50%	52%	JSC "Franzeluta"; JSC "Combinatul de Produse Cerealiere din Chișinău"	Yes
40	Manufacture of beverages (wine)	< 50%	100%	JSC "Combinatul de Vinuri Cricova"; I.S."Combinatul de Vinuri de calitate" Milestii Mici"; JSC "Vinuri-Ialoveni"; JSC "BARZA ALBA"	Yes
41	Manufacture of glass	50% < x < 90%	100%	I.S."Fabrica de Sticla din Chisinau";	Yes

Source: Markets and Competition OECD-WBG PMR indicators, Moldova (forthcoming, 2019); Public Property Agency. Register of Public Patrimony. Government decision no. 902 of 06.11.2017 on the organization and functioning of the Public Property Agency. Desk research. Elaborated by the author. Note: Values for market shares are estimates only based on best available public information. A firm is said to be publicly-controlled when national, state, regional or provincial governments (not including local governments or municipalities) hold, either directly or indirectly through a publicly-controlled firm, at least 50 percent of voting rights. \*Sectors with legal monopoly; \*\*Sectors that can also have public policy objectives and regulation beyond competition; \*\*\* I.S."Portul Fluvial Ungheni" controls the passenger terminal of the Giurgiuilesti International Free Port, cargo services are provided under concession.

#### Annex 7. Comparison of the Level of Prices In Moldova versus OECD Countries and in Chisinau and OECD Selected Cities, by Product (Using Numbeo Data)

Products	Moldova vs. OECD countries	Chisinau vs. comparator cities in the OECD
Apples	—	Higher

Bananas	Higher	Higher
Beef	—	—
Chicken	Higher	—
Eggs	Higher	—
Lettuce	Higher	Higher
Local cheese	Higher	Higher
Milk	—	—
Onions	Higher	Higher
Oranges	Higher	Higher
Potatoes	Higher	Higher
Tomatoes	Higher	Higher
White bread	—	—
White rice	Higher	Higher

Source: World Bank Staff own summary based on results from OLS regressions using 2011-2017 data from the Numbeo. The product-level regressions included year fixed effects with standard errors clustered at the country level. Cells with “—” in columns 2 and 3 indicate that the price differential is not statistically significant at the 10 percent level.

#### Annex 8. Resource Diversification Matrix

<i>Category of income</i>	<i>Source of income</i>				
	<i>Government</i>	<i>Students and families</i>	<i>Industry &amp; services</i>	<i>Alumni / philanthropists</i>	<i>International cooperation</i>
<b>Budgetary contribution</b>					
General budget	X				
Dedicated taxes (lottery, tax on liquor sales, tax on contracts, tax on export duties)	X		X		
Payroll tax					
<b>Fees for instructional activities</b>					
Tuition fees					
Degree / non-degree programs		X	X		
On-campus / distance education programs		X	X		
Advance payments	X				
Chargeback		X			
Other fees (registration, labs, remote labs)			X		
Affiliation fees (colleges)					

<b>Productive activities</b>					
Sale of services					
Consulting	X		X		X
Research	X		X	X	X
Laboratory tests	X		X		
Patent royalties, share of spin-off profits, monetized patent royalties deal			X	X	
Operation of service enterprises (television, hotel, retirement homes, malls, parking, driving school, Internet provider, gym)	X	X	X	X	
Financial products (endowment funds, shares)			X	X	
Production of goods (agricultural and industrial)			X	X	
Themed merchandises and services (smart card)					
Rental of facilities (land, classrooms, dormitories, laboratories, ballrooms, drive-through, concert halls, mortuary space, movie shooting)					
Sale of assets (land, residential housing, art treasures)					
<b>Fund raising</b>					
Direct donations					
Monetary grants (immediate, deferred)			X	X	X
Equipment			X	X	
Land and buildings	X			X	
Scholarships and student loans	X		X	X	X
Endowed chairs, libraries, mascot			X	X	
Challenging / matching grants		X	X	X	
Religious donations ("Zakat")		X		X	
Indirect donations (credit card, percentage of gas sales, percentage of stock exchange trade, lectures by alumni)		X	X	X	
Tied donations (access to patents, share of spin-off profits)			X		
Concessions, franchising, licensing, sponsorships, partnerships (products sold on campus, names, concerts, museum showings, athletic events)		X	X		
Lotteries and auctions (scholarships)					
<b>Loans</b>					
Bank loans	X		X		X
Bond issues		X	X	X	

Source: Elaborated by Jamil Salmi

### Annex 9. Performance Contracts

Performance contracts are nonbinding regulatory agreements, negotiated between governments and universities, defining a set of mutual obligations. In return for the participating universities' commitment to meeting the agreed performance targets, the government provides additional funding. The agreements may be with several or all institutions in a given higher education system, or with a single institution. All or a portion of the funding may be conditional upon the participating institutions meeting the requirements in the contracts. The agreements can be prospectively funded, or reviewed and funded retrospectively.

The following are Examples of countries or subnational jurisdictions with performance contracts include:

- Chile introduced “performance agreements” on a pilot basis in the late 2000s, in which four public universities volunteered to receive additional resources to implement a carefully negotiated institutional improvement plan with clear indicators to measure progress and outcomes. After a positive evaluation, the scheme has been extended to a large number of public and private universities.
- Costa Rica has used performance contracts to promote the transformation of four of its five public universities. It is the first time that the government is attempting to influence the behavior and performance of the public universities using financial incentives. The universities have traditionally operated in a totally independent way, receiving their budget directly from the Ministry of Finance as a set percentage of the national budget, as established by the constitution of the country.
- Denmark uses “development contracts” setting long-term improvement goals for the institutions.
- Finland has contracts that set out general goals for the entire tertiary education system as well as specific goals for each institution.
- France, since 1989, has allocated about one-third of the recurrent budget through four-year performance contracts. Payments are made when the contracts are signed, with a post-evaluation to assess the degree and effectiveness of implementation.
- Several U.S. states, for example Louisiana, Maryland, Michigan, North Dakota, South Carolina, Tennessee, and Virginia, use some kind of postsecondary education “compacts”.

The main advantage of performance contracts is to encourage institutions to improve their results on a voluntary basis without imposing central edicts that are not likely to be followed. From the government's viewpoint, it helps align the behavior of higher education institutions with national policy objectives. From the institutional perspective, it brings-in additional resources to implement the strategic plan, provided the institution has a transformative vision and the actual will to implement it.

The success of performance contracts depends usually on two factors. First, it is helpful to involve, in the negotiation of the performance agreement, experts who can be seen as neutral enough to facilitate a constructive dialogue between government and university leaders. In Chile, former university vice-chancellors, who were widely respected as “wise persons”, played a decisive role in that respect. Second,

the ministry in charge of higher education needs to devote sufficient expertise and time to monitor the implementation of the performance contracts.

### **Annex 10. Competitive Funds**

Well-designed competitive funds can greatly stimulate the performance of higher education institutions and can be powerful vehicles for transformation and innovation. One of the first such funds, Argentina's Quality Improvement Fund (FOMEC), which was supported by the World Bank, was instrumental in getting universities to engage, for the first time, in strategic planning for the strengthening of existing programs and the creation of new interdisciplinary graduate programs. Within universities, faculties that had never worked together began cooperating in the design and implementation of joint projects. In Egypt, the Engineering Education Fund helped introduce the notion of competitive bidding and peer evaluation in the allocation of public investment resources. The fund promoted, in an effective manner, the transformation of traditional engineering degrees into more applied programs with close linkages with industry.

A fundamental prerequisite for the effective operation of competitive funds—and one of their significant benefits—is the practice of transparency and fair play through the establishment of clear procedures and selection criteria, as well as the creation of an independent monitoring committee. In Chile, a second wave of higher education reforms was supported by a competitive fund for diversification (development of technical institutes not in the university sector) and quality improvement of all public universities. Brazil, Mexico, and Uganda have encouraged the formation of advanced human capital in science and technology through competitive funding mechanisms. In all these cases, the participation of international peer review experts has figured prominently.

In countries with a diversified higher education system, there may be a compelling argument for offering several financing windows with different criteria, or for setting up compensatory mechanisms to create a level playing field between strong and weak institutions. In a project supported by the World Bank in Indonesia during the 1990s, three different windows were designed to serve universities according to their actual institutional capacity. In the last higher education project financed by the World Bank in China in the early 2000s, the top universities were encouraged to form a partnership with a university in a poor province as a condition for competing. In Egypt the competitive fund in the Engineering Education Reform project in the late 1980s had a special window for technical assistance to help less-experienced engineering schools prepare well-formulated proposals. In Chile, a special window was opened to provide preparation funds for universities requiring assistance in strategic planning and subproject formulation.

The actual eligibility criteria vary from country to country and depend on the specific policy changes sought. In Argentina and Indonesia, for instance, proposals could be submitted by entire universities or by individual faculties or departments. In Chile, both public and private institutions were allowed to compete.

One of the principal benefits of competitive funds is the practice of transparency and fair play through the establishment of clear criteria and procedures and the creation of an independent monitoring committee. An additional benefit of competitive funding mechanisms is that they encourage universities to undertake strategic planning activities which can help the universities formulate proposals based on a solid identification of needs and a rigorous action plan.