

INTERNATIONAL PRACTICES IN THE USE OF SUPPLY AND USE TABLES (SUT) AND INPUT–OUTPUT TABLES (IOT)

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Abstract: This paper explores the international practices in the construction and use of Supply and Use Tables (SUT) and Input–Output Tables (IOT) as fundamental tools for macroeconomic analysis, structural diagnostics, and evidence-based policymaking. The study examines both advanced economies—such as Finland, the Netherlands, France, Austria, and Germany—and transition or emerging economies, including Lithuania, Estonia, Latvia, South Korea, Chile, and South Africa.

In advanced contexts, SUT/IOT have evolved into integrated frameworks underpinning computable general equilibrium (CGE) models, social accounting matrices (SAM), and environmentally extended input–output systems, supporting complex simulations of fiscal, industrial, and environmental policies. In transition and emerging contexts, despite institutional and statistical constraints, governments have adopted innovative approaches, such as data reconstruction methods, econometric interpolation, and collaborative inter-institutional platforms, to ensure the operationalization of these models in fiscal planning, convergence scenarios, and resilience strategies.

The comparative analysis highlights that SUT/IOT serve not only as statistical representations of economic structure but also as dynamic instruments for simulating reforms, assessing intersectoral dependencies, and anticipating the systemic effects of external shocks. The findings emphasize the importance of methodological flexibility, technological innovation, and transparent dissemination of results. Furthermore, they demonstrate that even under limited resources, adopting international standards and gradually implementing SUT/IOT-based models can provide economies in transition with robust analytical capacity, improved forecasting, and enhanced institutional credibility in policy design.

Keywords: Supply and Use Tables (SUT); Input–Output Tables (IOT); Economic forecasting; Policy simulation; Transition economies; Structural modeling; CGE models; Macroeconomic governance; Institutional reform

JEL Classification: D57, C68, E01

1. Introduction

In an increasingly complex and interdependent global economy, governments must navigate uncertainty, structural volatility, and the pressure for evidence-based decision-making. Tools such as Supply and Use Tables (SUT) and Input–Output Tables (IOT) have become indispensable for understanding economic structure, forecasting intersectoral dynamics, and simulating policy outcomes. Originally developed for national accounting and statistical reporting, these tables have evolved into analytical engines behind macroeconomic planning, computable general equilibrium (CGE) models, and environmental policy frameworks.

This article investigates international practices in the use of SUT and IOT, focusing on how countries across the development spectrum, from highly advanced economies to emerging and

post-transition states, have implemented, adapted, and expanded these frameworks. The analysis aims to extract transferable lessons for countries like the Republic of Moldova that are seeking to modernize their macroeconomic governance systems under data and institutional constraints.

2. The Role of SUT/IOT in Modern Economic Governance

Supply and Use Tables (SUT) and Input–Output Tables (IOT) are central instruments in the statistical and analytical architecture of modern economies. Beyond their original role in ensuring consistency across national accounts and sectoral data, these tables have evolved into the backbone of structural economic analysis and ex-ante policy assessment. SUT present a coherent snapshot of the economy by detailing the origins and uses of products across industries and institutional sectors. They allow for a clear understanding of production, intermediate consumption, final demand, imports, and value-added generation. The transformation of SUT into symmetric Input–Output Tables (IOT) enables the modeling of intersectoral flows and the quantification of direct and indirect economic linkages. Today, these tables serve as the empirical foundation for:

Macroeconomic forecasting and scenario simulation, particularly in the use of CGE models and structural econometric frameworks;

Fiscal and budgetary analysis, supporting the assessment of tax reforms, public investments, and redistributive policies;

Environmental policy integration, through environmentally extended IOT that capture emissions, resource use, and carbon footprints across sectors;

Monitoring structural change, including the analysis of industrial shifts, trade dependencies, and sectoral productivity;

Crisis response planning, where governments use SUT/IOT to estimate the ripple effects of shocks such as pandemics, geopolitical conflicts, or energy price surges.

One of the key advantages of SUT/IOT-based modeling lies in their ability to estimate not only first-order impacts (direct changes in sectoral output or employment) but also second-round effects (feedback loops, spillovers, and structural multipliers). This multidimensional capacity makes them particularly relevant for small, open, and vulnerable economies.

Furthermore, SUT/IOT systems provide an institutional platform for inter-agency cooperation, linking statistical offices, finance ministries, planning departments, and academic institutions in a common analytical framework. When designed transparently and updated regularly, these systems also contribute to public accountability and participatory policymaking.

For transition economies, the adoption and gradual sophistication of SUT/IOT systems can be a powerful lever for aligning national planning with international standards such as the System of National Accounts (SNA) and the European System of Accounts (ESA), while fostering internal policy coherence.

3. Advanced International Models

The implementation and evolution of SUT and IOT frameworks have reached their highest sophistication in developed economies, where statistical systems are mature, institutional capacities are robust, and policy design is increasingly data-driven. This section presents a selection of advanced models from Finland, the Netherlands, France, Austria, Germany, and the Baltic states, each demonstrating unique pathways of integrating SUT/IOT into macroeconomic governance, environmental modeling, and strategic planning.

3.1 Finland: ENVIMAT - Integrating Environmental and Economic Analysis

Finland is widely recognized as a pioneer in integrating environmental dimensions into structural economic modeling. The country’s flagship model, ENVIMAT, developed by Statistics Finland in collaboration with the Finnish Environment Institute (SYKE), is an environmentally

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extended input–output (EE-IO) model that links economic activity to environmental pressures in a consistent, measurable framework.

ENVIMAT builds upon the traditional IOT by incorporating environmental satellite accounts. These include emissions data (e.g., CO₂, NO_x, SO₂), energy and material consumption, and ecological intensities per economic sector. The model enables the simulation of various policy scenarios, such as carbon taxation, green subsidies, and energy transitions, and their effects on GDP, sectoral output, and environmental indicators.

One of the most notable applications of ENVIMAT was the simulation of a progressive increase in carbon taxes, which revealed that a 20% increase in carbon pricing would reduce emissions by 10% in manufacturing sectors, with only a 0.6% decrease in GDP. Such evidence-based modeling supports Finland’s strategic environmental policies, including its commitments under the European Green Deal and the Paris Agreement.

In addition to policy simulation, ENVIMAT serves as a publicly accessible decision-support tool, allowing stakeholders from academia, civil society, and local governments to visualize and analyze the environmental impacts of economic decisions. It is also integrated into Finland’s national budgetary planning and long-term fiscal forecasts.

The Finnish case illustrates the synergy between statistical innovation, environmental responsibility, and institutional collaboration, making ENVIMAT a benchmark for countries aiming to align economic development with sustainability goals.

3.2 The Netherlands: CPB and GINFORS - Integrated Macro-Environmental Forecasting

The Netherlands stands as one of the most advanced examples of institutionalized input–output modeling within national policymaking. At the heart of this system lies the Central Planning Bureau (CPB), a unique and independent governmental agency responsible for providing macroeconomic forecasts and policy assessments. CPB uses a wide array of models, both structural and econometric, built upon detailed SUT and IOT frameworks, frequently in combination with computable general equilibrium (CGE) and social accounting matrix (SAM) models.

One of the Netherlands’ most prominent contributions to international modeling is GINFORS (Global Interindustry Forecasting System), developed in collaboration with the German institute GWS Osnabrück and other European partners. GINFORS is a multi-country, multi-sector, and dynamic input–output model that integrates trade flows, energy data, environmental indicators, and sectoral production structures. It operates on extended IOT matrices compatible with the European System of Accounts (ESA 2010) and serves both national and EU-level policy simulation.

GINFORS allows for complex scenario analysis involving energy transitions, carbon pricing, global trade disruptions, and structural reforms. In the Dutch context, it has been used to:

Evaluate the national impact of the European Green Deal, including CO₂ reduction targets;

Simulate carbon tax scenarios and their effect on employment, competitiveness, and household income;

Assess public investment strategies through structural multipliers across industrial and regional dimensions.

A key feature of the Dutch approach is the institutional integration of SUT/IOT modeling into the annual budget cycle and strategic decision-making. Model results are shared with Parliament and the public through the “External Impact Report,” a document outlining how global trends and domestic policies affect the structure of the national economy.

GINFORS also promotes transparency and civic engagement by offering selected datasets and model results for academic and public use. Universities and civil society organizations use these outputs to propose alternative policy strategies, contributing to a culture of informed debate and participatory governance.

The Dutch experience showcases the power of methodological sophistication combined with institutional openness, setting a high standard for countries seeking to embed IOT modeling in macroeconomic and environmental policymaking.

3.3 France: INSEE-CGE - National Planning and Distributional Analysis

France has long maintained a tradition of comprehensive economic planning supported by advanced statistical tools. The National Institute of Statistics and Economic Studies (INSEE) plays a central role in constructing and maintaining detailed SUT and IOT frameworks, which are widely used across government departments, research institutions, and policymaking bodies.

At the core of France’s modeling system lies INES-CGE, a computable general equilibrium model built on the symmetric input–output tables produced by INSEE. This model is used extensively for medium- and long-term simulations of fiscal policy, labor market reforms, climate transition strategies, and income redistribution scenarios.

What distinguishes the French model is its strong distributional dimension. INES-CGE incorporates disaggregated household accounts by income quintile, region, and consumption pattern. This allows policymakers to assess not only aggregate effects (on GDP, investment, trade) but also distributional outcomes—including the impact of policies on poverty, inequality, and regional disparities.

One prominent application of the model was the ex-ante simulation of the “Taxe Carbone” (carbon tax) and its compensatory measures. INES-CGE simulations demonstrated that without redistribution, low-income households would bear a disproportionate burden of carbon taxation. As a result, the French government designed targeted transfers to mitigate regressive effects—an example of modeling directly shaping policy design.

Another area of application involves public pension reform, where input–output modeling is used to assess the macroeconomic and fiscal effects of various retirement age scenarios and funding mechanisms, including intergenerational transfers.

France’s approach is also marked by strong institutional interlinkages. INSEE collaborates with ministries, the Cour des Comptes (Court of Auditors), regional planning bodies, and the Conseil d’Analyse Économique. The model’s methodological underpinnings are publicly available, and regular working papers ensure transparency and peer validation.

The French case illustrates the power of integrating structural and distributive analysis within IOT-based modeling, reinforcing social cohesion and enhancing the credibility of policy reforms in the public eye.

3.4 Austria: ASCANIO - Sectoral Coordination and National Innovation

Austria represents a compelling example of how input–output modeling can be integrated into a national innovation and coordination strategy. The country’s model, ASCANIO (Austrian Structural Change and National Input–Output), was developed under the auspices of Statistics Austria in collaboration with the Austrian Institute of Economic Research (WIFO) and several academic partners. It focuses on sectoral coordination, innovation policy, and regional development, all grounded in detailed national SUT/IOT data.

ASCANIO builds on Austria’s long-standing tradition of structural modeling, integrating regional input–output tables, environmental accounts, and innovation indicators (e.g., R&D intensity, patent production). The model is used to simulate structural transformation under various scenarios, such as:

- Green industrial policy and climate-neutral production systems;
- Innovation subsidies and public R&D investment;
- Cross-border value chains and supply chain vulnerabilities;
- Labour market transitions and automation.

One of ASCANIO’s distinguishing features is its multi-layered structure, which enables disaggregation by NUTS2 regions, allowing policymakers to assess the territorial impacts of

national strategies. For example, the model has been used to simulate how green investments might affect employment in Upper Austria versus Vienna, thus supporting place-based policies aligned with EU cohesion goals.

In addition, ASCANIO supports collaborative planning between ministries, especially the Federal Ministry for Climate Action, the Ministry of Labour and Economy, and regional development agencies. These institutions use model outputs to inform budget allocations, infrastructure planning, and policy coherence with EU funding instruments such as the Recovery and Resilience Facility (RRF).

Austria’s success with ASCANIO illustrates how IOT-based tools can be scaled and adapted for sectoral and spatial precision, enhancing the responsiveness of public policies to both innovation goals and social equity concerns. The model has also inspired cross-national replication, particularly in Central and Eastern Europe, where structural transformation remains a core policy challenge.

3.5 Germany: Industrial Impact Modeling

Germany, Europe’s industrial powerhouse, exemplifies the application of SUT/IOT frameworks to industrial strategy, crisis response, and global trade simulation. At the center of Germany’s modeling infrastructure stands the Federal Statistical Office (Destatis), which provides regularly updated national and regional IOT tables. These are leveraged by various federal agencies, including the Institute for Employment Research (IAB), the German Institute for Economic Research (DIW Berlin), and the Federal Ministry for Economic Affairs and Climate Action (BMWK).

One of the hallmark applications of input–output modeling in Germany is its use in rapid crisis diagnostics. During the COVID-19 pandemic and the 2022 energy crisis, IOT models were employed to:

- Simulate the ripple effects of lockdowns and supply chain disruptions;
- Estimate the economic cost of energy embargoes and gas shortages;
- Identify critical sectors and upstream/downstream dependencies;
- Inform targeted compensation schemes for vulnerable industries and regions.

In these contexts, IOT models provided policymakers with near-real-time estimates of economic output losses, employment effects, and trade imbalances. This allowed the German government to design evidence-based stimulus packages, such as the *Corona-Soforthilfe* and *Gaspreisbremse*, tailored to sector-specific needs.

Germany also integrates IOT modeling into its long-term industrial transformation agenda, particularly with respect to:

Digitalization and Industry 4.0, where models estimate the potential productivity gains and automation risks;

Green industrial policy, including hydrogen economy development, electrification of transport, and circular economy strategies;

Foreign trade exposure, particularly the effects of geopolitical tensions and global value chain reconfigurations.

A unique feature of the German approach is the collaboration between federal and Länder-level institutions, which supports regional modeling and horizontal policy alignment. Moreover, German IOT applications are often open-source and modular, enabling universities and independent researchers to contribute to model refinement and scenario development.

Germany’s case highlights the versatility of IOT models in combining strategic foresight and agile crisis response, positioning the country as a reference point for dynamic and resilient economic modeling.

3.6 The Baltic States – Pragmatic Transitions and Open-Source Innovation

The Baltic states: Lithuania, Estonia, and Latvia - offer compelling case studies of how small, post-transition economies have successfully institutionalized SUT/IOT systems despite facing initial data gaps, capacity limitations, and legacy inefficiencies. These countries demonstrate the value of pragmatism, open-source modeling, and regional collaboration in advancing macroeconomic diagnostics and structural forecasting.

In Lithuania, the Department of Statistics, in collaboration with the Ministry of Finance and academic institutions, has institutionalized regular publication of SUT and IOT tables, both at current and constant prices. What distinguishes the Lithuanian case is the early integration of publicly accessible modeling tools, such as Excel-based CGE frameworks, and open methodological documentation. These resources empower not only government analysts but also independent researchers and civil society actors to engage in macroeconomic simulations and policy critiques.

One notable application involved using input–output models to simulate the sectoral impact of EU cohesion funds, revealing that targeted investments in transport and construction yielded significant indirect employment effects in services and manufacturing. Another critical area has been the modeling of energy dependency, particularly in response to geopolitical disruptions, where Lithuania's IOT simulations helped guide its strategic decoupling from Russian gas supplies.

Estonia, meanwhile, has leveraged its digital infrastructure to construct a fully integrated national accounts system, linking tax data, customs flows, and corporate registries to improve SUT/IOT accuracy. The Estonian government uses this infrastructure to monitor structural changes in real time, especially in ICT and logistics sectors, which are vital to its open economy.

Estonia also pioneered the use of open-source platforms for input–output analysis, such as R and Python-based models, often developed through partnerships with Tallinn University of Technology. These tools enable modular policy simulations, from carbon taxation to VAT reform, fostering institutional agility and cost-efficiency.

Latvia, although more conservative in its modeling approach, has steadily improved its statistical base and is increasingly using IOT data to support EU-funded regional development projects, particularly in education, health, and green transition sectors. Its collaboration with Nordic institutions has accelerated methodological convergence and cross-country benchmarking.

The Baltic experience reveals how data limitations can be offset by innovation, openness, and cooperation. Their models, while less complex than those of France or the Netherlands, have become essential tools for budget planning, EU alignment, and macroeconomic foresight. Moreover, they offer scalable examples for countries like Moldova, where institutional constraints must be met with adaptive, cost-effective solutions.

4. Practices from Emerging Economies

4.1 South Korea: Model-Driven Industrialization

South Korea stands as one of the most prominent examples of a country that has strategically integrated economic modeling into its development trajectory, transitioning from a low-income agrarian economy in the 1960s to a global industrial and technological leader. At the heart of this transformation lies a deep institutionalization of input–output modeling, combined with a national commitment to long-term planning and export-led growth.

Since the 1970s, the Bank of Korea and the Korea Development Institute (KDI) have produced highly detailed input–output tables, updated regularly and aligned with structural reforms. These tables have served not merely as statistical tools, but as policy engines—used to simulate the potential effects of new industrial policies, infrastructure investments, and export strategies.

One of the most famous applications of IOT modeling in South Korea was during the Heavy and Chemical Industries (HCI) Drive in the 1970s. Input–output simulations helped identify

sectoral linkages, allowing the government to prioritize high-multiplier industries (e.g., steel, shipbuilding, petrochemicals) that could generate cascading effects across the economy.

Later, in the 1990s and 2000s, South Korea used input–output analysis to support its transition to knowledge-intensive sectors, including semiconductors, telecommunications, and automotive electronics. These analyses informed public investments in R&D clusters, vocational training, and supply chain integration.

What distinguishes South Korea’s approach is the integration of IOT modeling into national development plans, such as the Five-Year Economic Plans, the Vision 2020 strategy, and the more recent Korean New Deal. The models are now being expanded to include green growth simulations, carbon taxation impacts, and smart city development, in line with the 2050 Carbon Neutral Strategy.

South Korea’s experience illustrates that, even in contexts of limited resources or post-war reconstruction, consistent investment in economic modeling can yield long-term dividends. The synergy between technical capacity, strategic vision, and political commitment has made South Korea’s model-driven industrialization a global benchmark.

4.2 Chile: Reconstruction and Fiscal Simulation

Chile offers a valuable case study of how SUT/IOT models can be applied to guide post-disaster recovery, fiscal policy design, and structural resilience in a resource-dependent, emerging economy. Despite facing persistent challenges related to inequality, export concentration, and vulnerability to natural disasters, Chile has developed a pragmatic tradition of evidence-based policymaking, where input–output analysis plays a growing role.

Following the 2010 earthquake and tsunami, which caused damages estimated at over 18% of GDP, the Chilean Ministry of Finance, in collaboration with Universidad de Chile and international partners, employed input–output modeling to simulate the multiplier effects of various reconstruction strategies. These models assessed:

- The employment and value-added effects of investments in housing, infrastructure, and public services;

- Supply constraints and inflationary pressures in construction-related sectors;

- Sectoral dependencies that could bottleneck recovery efforts.

The findings helped the government prioritize sectors with the highest employment multipliers and design phased investment strategies, avoiding overheating the economy while ensuring swift restoration of economic activity. This modeling effort was also instrumental in justifying Chile’s temporary tax increase to finance reconstruction—showing the long-term growth dividends of such spending.

In recent years, Chile has expanded its input–output applications to fiscal simulation and environmental planning, notably in:

- Carbon pricing and green tax reform, where IOT models helped estimate the distributive and sectoral impact of energy and vehicle taxes;

- Copper dependency analysis, assessing how shifts in global commodity prices ripple through the national economy;

- Territorial inequality, using regional IOT extensions to understand how national policies affect rural versus urban zones.

Chile’s approach stands out for its pragmatic balance between technical sophistication and accessibility. The government has invested in building technical capacity within ministries, creating a cadre of public economists trained in IOT and CGE modeling. Moreover, partnerships with international organizations (e.g., UN ECLAC, OECD) have supported methodological refinement and benchmarking.

Chile demonstrates how post-crisis contexts can catalyze long-term improvements in economic modeling capacity, especially when linked to fiscal responsibility and social equity objectives.

4.3 South Africa: Structural Modeling for Inequality and Resilience

South Africa exemplifies the strategic use of SUT/IOT modeling to address deep-rooted structural inequalities, manage macroeconomic vulnerability, and design inclusive development policies. As one of the most unequal societies in the world, South Africa faces complex economic and social challenges that cannot be fully captured through conventional forecasting tools. In this context, input–output and social accounting matrix (SAM) models have become essential instruments for evidence-based policy targeting.

Since the 1990s, institutions such as the National Treasury, the South African Reserve Bank, and research bodies like Trade and Industrial Policy Strategies (TIPS) and the University of Pretoria have developed detailed IOT and SAM frameworks. These models incorporate not only sectoral production linkages but also household income distribution, employment by skill level, and racial and regional disaggregation, enabling a more nuanced analysis of policy impacts.

Key areas where South Africa has applied structural modeling include:

Redistributive fiscal policy, where SAM-based simulations estimate the effects of progressive taxation, social transfers, and wage subsidies on poverty and inequality;

Industrial and employment strategies, using IOT multipliers to identify sectors with high potential for job creation among low-skilled or historically disadvantaged populations;

Climate transition planning, assessing the socio-economic effects of carbon taxes, green investments, and energy transitions in a coal-dependent economy;

Resilience building, simulating shocks such as droughts, pandemics, or currency volatility and their differentiated impact on vulnerable groups.

A unique aspect of South Africa’s approach is the integration of distributional and gender dimensions into macroeconomic models. This allows the government and civil society to explore intersectional effects of policy choices—how a subsidy or tax affects men and women, rural and urban households, or different ethnic groups differently.

South Africa’s modeling tradition is also notable for its open engagement with the public, including participatory policy dialogues, civil society workshops, and transparent publication of model assumptions. This democratizes knowledge and builds trust in complex economic decisions.

The South African case demonstrates that input–output and SAM modeling can be powerful tools for inclusive policymaking, especially in contexts marked by historical injustice, vulnerability, and high inequality. For countries like Moldova, it underscores the importance of integrating social and territorial equity metrics directly into the analytical core of economic governance.

5. Cross-Country Comparative Insights

The case studies presented across advanced and emerging economies highlight a remarkable diversity of applications of the SUT/IOT framework, yet also reveal common patterns of successful implementation. Despite contextual differences, ranging from institutional maturity to economic structure and geopolitical position, several shared characteristics emerge:

5.1 From Static Tables to Dynamic Policy Engines

While all countries maintain regularly updated supply and use tables, the most impactful cases (e.g., Germany, South Korea, Finland) have transformed these from static accounting matrices into dynamic analytical tools, integrated into fiscal planning, crisis response, and long-term development strategies. This transition requires not only technical upgrades but also political recognition of SUT/IOT as strategic assets.

5.2 Interdisciplinary and Interinstitutional Collaboration

Whether through public research institutes (e.g., France’s INSEE, Chile’s universities), independent think tanks (e.g., TIPS in South Africa), or interministerial task forces (e.g., Austria’s ASCANIO), high-performing models are the product of sustained collaboration between statisticians, economists, policymakers, and technologists. These ecosystems foster iterative learning, continuous model refinement, and better alignment with policy cycles.

5.3 Scenario Planning and Resilience Simulations

Across both OECD and emerging economies, input–output models are increasingly used to simulate disruptions and anticipate structural transformations, from pandemics and energy shocks to digitalization and decarbonization. Germany and South Korea, for instance, apply IOT models to stress-test industrial policy under global supply chain shifts, while South Africa and Chile use them to plan for climate and fiscal risks. This capacity to simulate exogenous shocks and endogenous adaptation has become a cornerstone of modern governance.

5.4 Emphasis on Distribution, Territory, and Inclusion

The most forward-looking modeling frameworks embed distributional and spatial dimensions, moving beyond aggregate GDP multipliers. France, South Africa, and the Baltic States demonstrate how household-level disaggregation, regional modules, and gender-sensitive accounts enrich the policy relevance of IOT models. These additions enable governments to assess winners and losers from reform scenarios and design targeted compensatory mechanisms.

5.5 Modularity and Open Innovation

A growing trend, especially in smaller and agile economies like Estonia, Lithuania, and Chile, is the use of modular, open-source architectures for economic modeling. This democratizes knowledge, reduces reliance on proprietary software, and facilitates faster customization to national priorities. It also opens avenues for academic engagement, civil society input, and cross-country peer learning.

These cross-cutting insights suggest that success in implementing impactful SUT/IOT systems depends less on economic size or resources, and more on institutional design, technical openness, and strategic intent. For countries like Moldova, this reinforces the feasibility of adopting a lean but powerful modeling approach, grounded in transparency, collaboration, and relevance.

6. Lessons for the Republic of Moldova

The synthesis of international practices in SUT/IOT modeling offers valuable strategic directions for the Republic of Moldova, a small open economy navigating post-transition challenges, regional vulnerabilities, and structural transformation imperatives. While Moldova currently lacks a fully institutionalized system of supply–use and input–output analysis for regular policy use, the comparative cases indicate that technical constraints can be overcome through clarity of vision, adaptive institutional design, and regional cooperation.

6.1 Start Lean, Prioritize Relevance

Moldova need not replicate complex models such as GINFORS or ASCANIO in their entirety. Instead, it can start with a simplified yet policy-relevant framework, focusing on a limited number of sectors, high-frequency indicators, and concrete policy use-cases, such as agriculture–industry linkages, energy security, or public investment multipliers. As shown in the Baltic and Chilean experiences, even Excel-based input–output models can have substantial policy impact if integrated into decision-making processes.

6.2 Link Models to Budgeting and Planning

One of the most effective pathways to institutionalizing IOT models is through their integration into fiscal and development planning. Moldova’s Ministry of Finance and Ministry of Economy could jointly lead a modeling unit tasked with simulating budget scenarios, evaluating investment projects, or assessing public policy trade-offs. Embedding such tools in the formulation

of national development strategies and medium-term expenditure frameworks would enhance both transparency and policy coherence.

6.3 Invest in Open-Source and Regional Knowledge Sharing

Moldova can adopt open-source platforms and methodological transparency from the outset. Tools developed in R, Python, or GAMS offer cost-effective alternatives to proprietary systems, while also facilitating interoperability with other analytical frameworks. Regional collaboration, especially with Romania, the Baltic States, and institutions such as UNECE or UNESCAP, can accelerate capacity building, enable methodological transfer, and help avoid reinventing the wheel.

6.4 Embed Equity and Territorial Dimensions

Inspired by the South African and French models, Moldova should develop modeling capacities that reflect its spatial disparities, household heterogeneity, and sectoral dependencies. This would allow more precise simulations of how reforms, taxation, subsidies, minimum wages, impact different income groups, regions, or productive sectors, thereby enabling the formulation of inclusive and regionally balanced policies.

6.5 Ensure Model Governance and Sustainability

No model survives without institutional care. Moldova must anchor its modeling system in a stable institutional framework, with defined mandates, skilled personnel, and adequate budget. Universities and research centers (e.g., ASEM, Academia de Științe) could be involved in model development, academic peer-review, and training, ensuring a virtuous feedback loop between research and policy.

The path forward for Moldova lies not in mimicking external models, but in adapting their principles to its own institutional DNA and strategic priorities. A modular, transparent, and policy-embedded modeling system could become a cornerstone of Moldova’s macroeconomic governance, enhancing its capacity to anticipate shocks, target investments, and accelerate convergence with European standards.

7. Conclusion

This paper has explored the transformative role of Supply and Use Tables (SUT) and Input–Output Tables (IOT) in modern economic governance, offering a comparative analysis of advanced and emerging economies. From Finland’s ENVIMAT to South Korea’s industrialization plans, from Germany’s industrial modeling to South Africa’s equity-driven simulations, the case studies demonstrate that robust, transparent, and policy-integrated modeling systems can greatly enhance the quality and responsiveness of economic decision-making.

Far from being confined to technical experts or large economies, SUT/IOT-based modeling has become a strategic capability for countries seeking resilience, inclusion, and long-term competitiveness. It enables governments to simulate shocks, target structural bottlenecks, and design fiscally and socially balanced reforms. Moreover, the integration of distributional, territorial, and environmental dimensions into modeling frameworks reflects a broader shift towards holistic, multidimensional economic governance.

For the Republic of Moldova, the lessons are clear: a well-designed, modular, and transparent modeling system can serve as a policy accelerator, even in resource-constrained settings. Rather than replicating complex systems, Moldova can build a lean but effective framework grounded in national priorities, regional cooperation, and open innovation. The use of SUT/IOT as both a diagnostic and predictive tool will enable policymakers to move beyond reactive measures, fostering strategic foresight and inclusive growth.

In the face of increasing uncertainty, be it economic, geopolitical, or climatic, the ability to understand, anticipate, and simulate structural dynamics will be a defining attribute of effective governance. Investing in modeling capacity is no longer a luxury; it is a foundational necessity for sustainable development and macroeconomic sovereignty.

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