

# National Economic Security in the 21<sup>st</sup> Century: Conceptual Outlines and Practical Frameworks

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## Abstract

This study is a theoretical investigation of the National Economic Security (NES) phenomenon in the 21<sup>st</sup> century. It provides a comprehensive, strategic and dynamic conceptual model designed to empower policymakers in any country with the knowledge for understanding, and assessing the state of NES. The proposed Practical Frameworks operationalize the conceptual model, from which it derives, for real-world use, and help practitioners to develop their own country-specific analysis and develop tailored solutions. The method of research is multidisciplinary. It draws on and combines security studies, theory of international relations, economics, and economic policies, plus the subcategorization methodology.

The study leads to the conclusion that the traditional approaches to NES concepts in Canada, U.S. and other leading economies, are predominantly static, protective, partial, lacking a systemic and strategic vision and as such – not as effective as they could be. Based on these findings a new holistic conceptual model for the NES is proposed and practical frameworks are developed. The key topics discussed are the NES concept's Characteristics, Elements, Aspects, Desired Outcomes, and Components plus the NES Policy. Culmination of this paper's exploration is the proposal for a new NES concept - Comprehensive and Dynamic NES, as the appropriate conceptual approach to navigate the future of national economic security.

**Keywords:** national economic security, economic security policy, new conceptual model

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## Introduction

Throughout human history security played an enduring fundamental role – from the primal need for individual survival in prehistoric times to the complex web of interconnected threats and actors in the modern era. The object of security has expanded from the individual to the state and beyond. Similarly, the subjects responsible for providing security have multiplied, reflecting the increasing complexity of the global landscape. Threats and dangers have also transformed, moving from immediate physical dangers to organized interstate conflicts. Consequently, the means and methods of achieving security have become increasingly sophisticated and multifaceted, requiring not only military strength but also diplomatic engagement, economic stability, technological innovation, and international cooperation.

The conventional understanding of National Economic Security (NES) is focused mainly on protectionist measures. In an Era of Transformation with its revolutionary technological advancements, geopolitical shifts, and transnational challenges the landscape of economic security has been transformed. The interconnectedness of national economies is increasing, making them susceptible to external shocks and the actions of other states and non-state actors.

The prevailing traditional approaches became insufficient in the face of globalized markets, intricate supply chains, and novel threats like cyber-economic warfare and climate change. They may fail to account for the interconnectedness of the global economy, the importance of resilience and adaptation of the national economies, and the well-being of individual citizens; as such they are becoming increasingly inadequate for the 21-st century economic globalization. Effective management of National and International Economic Security in the current global economic context became an imperative in the 21st Century.

To adequately safeguard national and international economic interests of the nation-states it is of critical importance to transition from reactive, defensive postures to proactive adaptive, cooperative strategies that acknowledge the inherent dynamism of the global economy. The increasing trend of global economic integration, from one side and the growing problems and uncertainties in the world, from the other side, necessitates new approaches to NES.

In response to the intricate interplay of a number of interconnected and powerful emerging trends and developments and the ineffective traditional approaches, a new conceptual approach, a new fundamental and deliberate philosophical shift from static, reactive, and often purely defensive postures is needed. In this paper I propose such a new concept – **Comprehensive and Dynamic NES (CDNES)**. By fundamentally embracing the inherent fluidity of the global economic landscape, this proactive paradigm aims for sustainable economic resilience, stability, and the capacity to pursue national interests effectively in a competitive global environment.

Neglecting the problems of the NES carries very significant potential negative consequences, such as dangerous economic and financial instability, slow growth, very

limited capacity to withstand and recover from economic shocks, lower level of national economic competitiveness, loss of sovereignty, and diminished national posture and role in the global economy, to mention some of them.

NES is very complex phenomenon. It is marked with specific content for its components, complicated relationships between them, multiple levels, and dimensions. Hence, the study employs an interdisciplinary approach combined with science subcategorization. The interdisciplinary method draws on a number of disciplines such as security studies (national and international), international relations, national and international economics and economic policies. For example, many scientific categories are borrowed from the general theory of international security and applied to the NES concept (Stefanov, 2008).

The science subcategorization method allows creating a subcategory in scientific classification. The concept of “national economic security” is constructed as a specialized subcategory. The hierarchy flows from a general system (“security”), to a subsystem (“economic security”), and to a highly specialized domain (“national economic security”), reflecting logical narrowing and specialization. These three concepts are related as hierarchical conceptual structure, where each subsequent concept is a specialization of the previous, moving from general to specific. Each level inherits properties of its parent category, but adds own specificity and context. This hierarchy allows clear, logical analysis and targeted research or policy development at appropriate level of abstraction.

National and international economic securities are inseparable and mutually dependent, although they have different specifics – characteristics, building elements, boundaries, dynamics, methods and means of their governance and management. In an increasingly globalized and interconnected world, NES cannot be pursued in isolation. Therefore, a comprehensive understanding of NES necessitates a thorough grasp of these interdependencies, recognizing that promoting international economic stability and cooperation serves better a nation’s long-term security interests than relying on unilateral aggressiveness, no matter how powerful is the country.

The paper is structured in several parts. The state-of-the-art subsection presents a brief overview of the shift in the NES debate in Canada and US whereas the following parts discuss the NES concept’s building blocks and practical frameworks: NES basic characteristics and fundamental elements, its components, key aspects and desired outcomes, as well NES policies and future prospects. The final part elaborates proposal for a comprehensive and dynamic NES concept offering a new approach to the NES in the 21-st century.

That paper does not cover many important topics, good candidates for future research, such as the interdependence and interaction between the NES key components, the NES environment as a source of threats and opportunities, and the system of NES measurable indicators. Of a special interest could be the NES of member-states and the EU’s collective economic security.

The research has a twofold purpose: First, to propose a logical, comprehensive, dynamic and strategic *conceptual model* that includes basic characteristics, elements and components, key aspects and desired outcomes of the NES policy that reflects the growing

turbulences and uncertainties, complex interdependencies, and non-linear dynamics of the 21st-century global economy, *valid for any country and region of the world*. Second, to provide *analytical frameworks* designed to empower professionals with the knowledge for understanding, assessing and developing NES strategies and developing their own country content-specific analysis and tailored solutions. Developing the conceptual model and practical frameworks based on it, makes this theoretical paper an application-oriented work. The frameworks are adaptable by different policymakers in different country's context, leaving the final context-specific *practical recommendations* to the user.

## **Brief overview of literature in Canada and the U.S.**

Before discussing the basic characteristics of NES, let us overview how the debate of the NES paradigm shifted in Canada and U.S. in the last several years. The purpose is to mainly *illustrate* the recent growing attention in academic and political circles towards the NES. A comprehensive and in-depth worldwide literature review to show the evolution, dynamics and concerns about NES in different regions of the world is out of the scope of the paper.

The concept of NES in Canada and US is shifting slowly from reactive protection to proactive resilience, towards broadening the definition of threats, convergence of economics and national security, focus on strategic industries and technologies, to become a central organizing principle for statecraft. The increased interest has been championed by several key thinkers, academics, and policymakers. These individual scholars and institutions have moved the conversation from a narrow, military-focused view of national security to one that is encompassing many more elements, including economic security.

In Canada, several scientists and institutions have played a leading role in reshaping the debate on NES. Lefebvre (2024) published an influential article directly addressing NES. His ideas have significantly shaped the conversation in Canada around developing a robust, forward-looking framework for economic security. In their analysis Macklem and Rogers (2025) outlined the current vulnerabilities and strengths of Canada's financial system at a time of international trade tensions, especially with the U.S., heightening risks to national economic stability. The Business Council of Canada (2023) contributed in the debate by urging a new integrated national security strategy that examines the linkage between economic growth, innovation, and national security. They see economic security of Canada nowadays as central and proposed legal and structural reforms.

Canadian Security Intelligence Service (CSIS, 2022) and the newly established Research Security Centre under Public Safety Canada provided a number of works that detail strategies, guidelines, and collaboration models designed to safeguard Canadian research and the economy from espionage, foreign interference, and emerging security threats. Economic security is seen as a national security priority. Canadian Centre for Policy Alternatives (CCPA) and Institute for Research in Public Policy (IRPP) analysed aspects of NES and national security (Jain and Hughes, 2023). The Centre published a paper arguing for a distinct Canadian economic security strategy. The State of Research Security in Canada detailed federal

initiatives to protect research partnerships and sensitive technologies from espionage and foreign leverage (Mauro, 2025). An interesting publication explored geopolitical threats and emphasised the necessity of coherent national economic statecraft (Donovan et al., 2025).

Canada's current debate integrates economic issues and national security into a unified policy framework, reflecting global best practices and responding to new international risks.

In the United States during the last decade, in comparison to Canada, there was a growing body of literature that recognized the importance of NES. In a number of publications the focus of research was only on different elements and aspects of the NES and not on the concept of NES as a whole. Several key thinkers and scholars contributed to the debate.

Two influential political scientists Farrell and Newman (2019) were active in shaping the modern discourse on NES. They discussed how global economic networks and their hubs can be used as tools of state coercion. Their work provided a theoretical foundation for policies aimed at supply chain resilience and technological sovereignty and security. Capponi, Du and Stiglitz (2024) analyse why supply networks are intrinsically underprepared for shocks, advocating for policies to incentivize greater capacity and resilience in supply chains. Sen (2000) added to the debate arguing that development should be measured not by economic growth alone but by the expansion of "real freedoms" that people enjoy, such as the freedom from poverty, lack of healthcare, and political oppression. This concept has provided a strong ethical framework for a more holistic approach to economic security.

Institutions and Think Tanks have played a central role in translating these academic theories into actionable policy recommendations. Goodman (2024), a leading scholar on national economic security from the Council on Foreign Relations (CFR), in a notable publication addressed the challenges and policy tools for advancing national economic security. He provided a critical framework for economic security policymaking in the U.S. Kilcrease and Gertz (2025) from the Center for a New American Security (CNAS) advocated for a more assertive U.S. economic security strategy. Scientists from Brookings Institution (Laing, 2025) have also contributed to the discussion by focusing their extensive research on trade, technology, and economic policy. They analysed the challenges posed by economic interdependence and offered frameworks for how nations can protect their critical technologies and supply chains without resorting to full-blown protectionism.

## **Basic characteristics of NES**

The theory of NES, examines the nature of economic security as a phenomenon, the constituent elements of its abstract model, the methods and strategies for its maintenance, defence, and restoration at various national levels, without neglecting the link to the international economic security problems.

NES is an integral part of the broader national security mega-system as its subsystem, although it is very complex by itself composed of multiple constituent elements. Nymalm (2025) supported the view that NES is a new aspect of national security thinking. Other authors argue that economies are complex adaptive systems. The term "complex

subsystem” in the context of NES is often used in policy documents and reports rather than in specific academic papers. The NES “complex sub-systems” are interconnected and mutually reinforcing, and the strength of the overall NES system depends on the health of each one of them (Arthur et al., 1997).

At its core, NES is a state or condition of a nation-state’s dynamic economic system and its constituent elements. It is present when the nation’s economic interests are reliably protected, its citizens’ welfare is well ensured, and its capacity for independent action remains uncompromised by economic vulnerabilities. Rodrik (2013), while challenging the relevance of the nation-state, implicitly defines NES as a condition of a nation’s economic system. He argues that the state remains the primary determinant of economic outcomes and the central locus for maintaining a stable and prosperous economy, which is the condition that NES aims to achieve.

Beyond being a state, NES is inherently a continuous process. It involves the sequential development, vigilant maintenance, and strategic adaptation of the conditions necessary for a secure economic environment. This ongoing process requires foresight, constant monitoring, and adaptive policy responses to evolving threats and opportunities. NES is a paramount value for every nation. Without a secure economic foundation, a nation’s political independence and its capacity to pursue its national interests can be severely constrained and its social stability harmed. NES refers to the multiple levels of the national economy. At each of its level NES manifests itself with different specific characteristics, challenges, opportunities, policies and approaches. Table 1 helps to gain a more nuanced understanding of the NES at its different levels and develop more targeted and effective policies to enhance national economic security.

Given its nature and dynamic fluctuations, NES necessitates clear *operational imperatives*: attainment – when absent, maintenance – when present, and restoration – when compromised. These imperatives dictate the continuous policy cycle required to manage economic security. Economic Security, as an aspect of the national security in general, is a basic legal and moral right, which is common, undeniable and equal for all states. It is one of the supreme national values. No one could have any reasons to claim for more economic security than the others.

NES *Problems* emerge any time when one or a group of subjects (countries or corporations) confront aggressively their own economic interests with the economic interests of another subject, or a group of subjects. That aggressive, confrontational behaviour creates threats and dangerous challenges. The NES problems have a *multifaceted nature*. They are complex, dynamic, with varying significance, diverse solutions, and potential for economic damage, temporal effects, and unique contextual manifestations. Jaeger (2023) maintains that economic security problems nowadays are created by a wide range of factors, including cyber threats, climate change, foreign investment, and demographic shifts. He emphasizes that a holistic approach is necessary to address these complex, interconnected economic security problems.

**Table 1. NES across different levels of the economy**

National Economy	Economic Stability and Growth	Economic Sovereignty and Strategic Autonomy	Economic Resilience and Shock Absorption	Economic Welfare and Social Cohesion	National Economic Competitiveness
Macroeconomics	Aggregate demand management, fiscal and monetary policy effectiveness, sustainable growth trajectory, inflation control, balance of payments stability.	Control over key macro-economic levers (interest rates, exchange rates), independence from international financial institutions' undue influence, ability to implement national economic priorities.	Capacity to withstand global financial crises, effective counter-cyclical policies, diversified sources of growth, stable financial system.	Equitable distribution of national income, poverty reduction, access to basic public services (healthcare, education), overall quality of life indicators.	Overall productivity and GDP growth, ability to attract foreign direct investment (FDI) and foster internal entrepreneurship, balanced international economic relations, and coordinated economic policies with leading nations.
Economic Sectors	Sectorial productivity growth, competitiveness in global markets, diversification of the sectorial base, contribution of each sector to overall GDP and employment.	Strategic control over critical sectors (e.g., energy, agriculture, technology), reduced reliance on foreign dominance in key industries, development of domestic capabilities in strategic areas.	Sectorial diversification to reduce vulnerability to specific shocks, redundancy in critical infrastructure within sectors, adaptability of sectors to technological and environmental changes.	Fair labour practices within sectors, contribution of sectors to employment and income generation for different segments of the population, access to opportunities across sectors.	Sectorial productivity growth and global competitiveness, strategic optimization of industrial structures, and strengthening innovation capacity to drive sustainable growth.
Main Industries	Innovation and technological advancement within key industries, productivity gains, global competitiveness, contribution to exports and national income.	Domestic ownership and control of strategically important industries, protection against unfair foreign competition, development of indigenous technological capabilities, secure supply chains for critical inputs.	Industry-level diversification of products and markets, robust supply chain management, capacity to adapt to disruptions (e.g., technological obsolescence, geopolitical risks), business continuity planning.	Contribution of industries to job creation and fair wages, investment in workforce training and development, adherence to ethical and social responsibility standards.	Innovation and technological advancement, global competitiveness, secure and diversified supply chains for critical inputs, and adaptability to rapid technological changes.



Continued

National Economy	Economic Stability and Growth	Economic Sovereignty and Strategic Autonomy	Economic Resilience and Shock Absorption	Economic Welfare and Social Cohesion	National Economic Competitiveness
Business Corporations	Profitability, innovation, investment in research and development, contribution to employment and economic growth, adherence to regulations.	Ability to operate autonomously without undue foreign influence, protection of intellectual property, secures access to critical resources and technologies, resilience to economic coercion.	Diversified supply chains, robust risk management strategies, business continuity plans, ability to adapt to changing market conditions and regulations, financial stability.	Fair labour practices, contribution to local communities, ethical business conduct, provision of quality goods and services to consumers.	High profitability, continuous innovation and investment in R&D, adaptability to changing market conditions, and leveraging technology for operational efficiency and competitiveness.
Citizens	Employment levels, income distribution, access to affordable goods and services, savings and investment opportunities, financial literacy.	Protection against economic exploitation, access to essential resources and services independent of foreign control, ability to participate in the national economy without undue external constraints.	Access to social safety nets during economic hardship, opportunities for retraining and up skilling, protection against job displacement due to economic shocks, access to insurance and financial support.	Economic opportunities for all segments of society, reduced income and wealth inequality, access to quality education and healthcare, overall economic well-being and security.	High levels of human capital through education and training (including STEM), access to opportunities for skill development and retraining, and the ability to participate productively in a knowledge-based economy.

Source: Created by the author



NES could be seen through two lenses: as an *Objective phenomenon* and *Subjective view on it*. This characteristic draws on philosophical concepts of objectivity and subjectivity. Objective economic security refers to the actual state of reality. It exists independently of anyone's perception or beliefs. Subjective economic security, in contrast, is a state of mind. It is determined by how reality is perceived and interpreted by individuals dealing with it. Allison (2017) touched that point by arguing that a rising power's actions, which may be objectively aimed at economic growth, can be subjectively viewed by an incumbent power as an existential threat, leading to a security dilemma. Different subjects understand, interpret and use differently the meaning and the content of economic security concept while protecting national economic interests.

NES is becoming an *important criterion* in the formulation and execution of the national economic policies. It defines a country's capacity to formulate and implement its preferred economic policies. NES is also *deeply intertwined* with global economic stability, requiring a balanced international economy, coordinated economic policies with leading nations, and robust mechanisms to deter threats to the international financial system. NES is *achieved* when a nation's economic interests are effectively safeguarded against both internal and external threats, dangers and risks. It entails protection from economic coercion and disruption, fostering condition conducive to sustained economic development and growth, and ensuring the preservation of the population's living standards and well-being.

Economic sovereignty is a NES Prerequisite and Fundamental Interest. It represents a nation's inherent and practical capacity to autonomously formulate, implement, and enforce its own economic policies, regulations, and strategic decisions without experiencing undue external influence or coercion. The erosion of economic sovereignty can manifest itself in various forms, including the imposition of unfavourable conditions by international financial institutions, the coercive use of economic leverage by other states, the binding constraints of international agreements that were not freely and fairly negotiated, or the undue influence of multinational corporations that overshadow domestic economic priorities.

While the basic characteristics offer a broad understanding of NES, a more granular analysis requires identifying its core components. Therefore, we proceed to identify the fundamental elements that serve as the foundational building blocks for this concept.

## Fundamental elements of NES

### ***Economic Object: what is being secured?***

The Economic Object of NES refers to the entirety of a nation's economic system. This encompasses all tangible and intangible elements that constitute and enable economic activity, including its assets (financial, natural, human, technological, infrastructural), the processes through which economic value is created, distributed, and utilized (production, distribution, consumption), and the institutional frameworks that govern and regulate

economic behaviour (financial markets, regulatory bodies, trade organizations). Neu and Wolf (1994) in their foundational report for the U.S. context identify a nation's economic interests, as the primary objects that must be protected. The Economic Object represents the core of what a nation strives to protect and ensure its continued viability. It is a complex and dynamic system with numerous interconnected parts. Securing the economic object necessitates protecting each of these components from threats that could impair their functionality, diminish their value, or lead to systemic instability.

***Economic Subject: who is interested/benefiting and involved?***

The Economic Subject in the context of NES refers to the entity or entities that are the primary actors responsible for ensuring it and the primary beneficiaries of economic security. Nymalm (2025) argued that the state has re-emerged as the primary subject of economic security, as the central actor in developing and implementing policies to counter economic vulnerabilities. The nation-state has to formulate and implement policies to protect its economic interests and the well-being of its citizens. However, individual citizens, businesses, and various societal groups also constitute Economic Subjects whose security is a central concern and who actively contribute to overall NES through their economic activities and resilience.

***Economic Uncertainty: condicio-sine-qua-non***

Economic Uncertainty is about the unpredictability of future economic conditions, the actions of other actors, and the emergence of potential threats. Economic Security and Uncertainty are inherently and inextricably linked. Baker et al. (2016), in a seminal paper, define and quantify economic uncertainty. Their index is now a standard tool for measuring this concept, a major element of NES. The level of future uncertainty has a direct and inverse relationship with the existence of economic security problems. When uncertainty disappears the problem of economic security also disappears. This is a fundamental link between uncertainty and economic security problems. If future states were known with absolute certainty, there would be no need for proactive measures to protect against adverse outcomes. Security protecting measures are, in essence, attempts to reduce uncertainty about future outcomes. Uncertainty of the future is not a static condition but rather a fluid and evolving element within the framework of economic security.

***Economic vulnerability***

Economic vulnerability, in essence, represents the inherent fragility and susceptibility of an economic system to adverse shocks and disruptions. It is about the mechanisms by which external or internal pressures can inflict significant negative impacts on an economy's performance, stability, and the well-being of its constituents. A deep understanding of economic vulnerability is about dissecting the underlying structural weaknesses that amplify the impact of these risks. Briguglio et al. (2009) define economic vulnerability as a nation's exposure to exogenous shocks, often due to high levels of economic openness or a lack of diversification. Economic vulnerability includes two key components: "exposure" and "inability to cope." Exposure refers to the degree to which an economy faces potential

risks. Inability to cope refers to the internal weaknesses and lack of adaptive capacity that amplify the impact of an exposed shock.

***Economic Interest: defining goals and values***

Economic Interests in the context of NES define the specific objects, goals, values, and objectives that a nation seeks to protect, advance, and achieve. These interests articulate what a nation deems vital for its economic prosperity, and overall well-being. They can range from maintaining macroeconomic stability and ensuring a certain standard of living for its citizens to securing access to critical resources, promoting technological leadership, and upholding its global economic competitiveness. Economic Interests provide the normative framework for a nation's NES strategy. They answer the question of why a nation seeks economic security and what specific outcomes it prioritizes. These interests evolve over time in response to changes in the domestic and international economy, shifts in national priorities, and the emergence of new challenges and opportunities.

***Economic challenges***

The concepts of economic threats, dangers and risks are distinct yet interrelated economic challenges. Understanding these nuanced distinctions is crucial for practitioners aiming to develop robust NES strategies, moving beyond generic risk management to more precise identification, assessment, and mitigation. Effective NES necessitates a precise vocabulary to categorize and understand potential adverse occurrences. While often used interchangeably in colloquial discourse, "threats," "dangers," and "risks," possess distinct scientific and conceptual meanings, each demanding a tailored analytical approach for practitioners.

***Economic threat: the agent of potential harm***

An economic threat is any declaration by a subject in economic relations to do something harmful to another subject's economic interests. It refers to a potential source of harm, whether active or latent, that has the capacity to inflict damage or disruption upon an economic system or its components. Humenyuk's (2015) article examines how the process of European integration reshapes and intensifies structural threats to the economic security of a region, particularly in a context exposed to globalization and integration shocks. The author's central aim is to systematize and classify the main threats to regional economic security—such as vulnerabilities, risk factors, and destabilizing external influences. The analysis of threats is therefore primarily concerned with identification, attribution, and capability assessment. Understanding economic threats is paramount for intelligence gathering, attribution, and strategic counter-planning. It guides decisions on spending, diplomatic engagement, regulatory frameworks, and early warning systems for identifying potential sources of future threats.

***Economic danger: the state of exposure***

An economic danger refers to a perilous or vulnerable condition or circumstance that significantly increases an economic system's susceptibility to harm from a given threat. It describes a state of heightened exposure or inherent weakness. An economic danger is the pre-existing condition that makes an economy particularly susceptible if a threat

materializes. Economic dangers, like threats, can stem from internal or external factors, often representing a nation's specific vulnerabilities. Dangers do not cause harm directly, but they amplify the negative impact if a threat materializes. Many dangers are rooted in deep-seated structural characteristics of an economy.

***Economic risk: The quantified likelihood of loss***

An economic risk is the quantified or estimated potential for loss, damage, or negative impact resulting from the interaction of an identified economic threat with a specific economic vulnerability. It encapsulates both the likelihood of an adverse event occurring and the magnitude of its potential consequences. Economic risk is the central concept for decision-making in NES. It moves beyond mere identification of threats and dangers to a more sophisticated assessment that informs resource allocation and mitigation strategies. Risk is inherently probabilistic and consequence-driven.

In the context of NES, economic risk signifies the potential for an adverse event to undermine a nation's prosperity, stability, and sovereignty. Economic risks are dynamic - they change with evolving threats, shifting vulnerabilities, and the effectiveness of existing mitigation measures. They are also highly contextual, varying significantly across different nations or even regions within a nation. The practical importance of the concept of economic risk is its role as the cornerstone of decision-making and resource allocation in NES.

***Economic shock: the real impact on the economic object.***

Klein (2007) introduced the "shock doctrine," arguing that a shock can be a catalyst for fundamental economic and social change. An economic shock can be defined as a sudden, unexpected, and significant disturbance to an economy that causes substantial deviations from its existing equilibrium and trajectory. Shocks can originate from within the domestic economy (endogenous) or from the external environment (exogenous).

The key characteristics of an economic shock are its *suddenness*, meaning it occurs relatively quickly and often without sufficient prior warning; its *unexpectedness*, implying that economic subjects did not fully anticipate its occurrence or magnitude; and its *significance*, indicating that it has a substantial impact on key macroeconomic variables, economic sectors, or the overall functioning of the economy. Economic shocks can manifest in various forms like demand-side shocks and supply-side shocks that are abrupt changes in aggregate supply, such as a surge in energy prices due to geopolitical instability or a large-scale natural disaster disrupting production and supply chains. IMF (2023a; 2023b) in its Annual report details how various shocks are causing economic fragmentation and creating long-term challenges for global and national economic security. The report argues that global financial stability risks have risen sharply because higher and more persistent inflation, rapid monetary tightening, and recent banking strains interact with pre-existing vulnerabilities in debt, asset valuations, and non-bank finance. It emphasizes that tighter financial and monetary conditions, combined with geopolitical tensions and fragmentation risks, could trigger disorderly market adjustments and stress in weaker sovereigns and institutions.

The impact of an economic shock is not limited to immediate disruptions. Important is its severity, duration, and cascading effects throughout the economy. Economic security can be viewed as the desired outcome of effectively managing and mitigating the risks associated with economic shocks. A deep understanding of economic shocks is not merely an academic exercise but a crucial operational requirement. Ultimately, the ability to anticipate, withstand, and recover from economic shocks is a defining characteristic of a truly economically secure nation. In Table 2 the introduced concepts are distinguished along several key dimensions. By adopting this conceptual framework, practitioners can move beyond generic crisis response to develop more scientifically grounded and strategically effective NES strategies.

**Table 2. Distinguishing Concepts**

Con- cept	Definition	Focus of Analysis	Primary Action for Practitioners	Relationship to Risk
<b>Threat</b>	A potential source or agent of harm with the capacity to inflict damage.	<i>Who/What</i> has the capability to harm.	Identification, Attribution, Counter-Planning (Preventative)	Component of Risk (Threat x Vulnerability)
<b>Danger</b>	A perilous or vulnerable condition that increases susceptibility to harm from a threat.	<i>What conditions</i> make us susceptible?	Vulnerability Assessment, Capacity Building (Mitigative)	Component of Risk (Vulnerability)
<b>Risk</b>	The quantified potential for loss/impact from Threat and Danger.	<i>How likely &amp; how bad</i> is the potential outcome?	Prioritization, Resource Allocation, Policy Formulation	The quantified potential outcome itself
<b>Shock</b>	A sudden, significant disruption to the economic system	<i>The event itself</i> and its immediate impact.	Crisis Management, Emergency Response, Recovery Planning	The Realization of Risk

Source: Created by the author

### ***Guarantees and mechanisms for NES***

NES guarantees and mechanisms are the tools and systems a nation uses to ensure its economic security. McCaffrey and Poitiers (2024) provide a detailed review of the modern toolkit of these mechanisms. The key guarantees and mechanisms vital for achieving robust NES include Diversification and Resilience, Strategic Autonomy, Financial Stability, Technological Leadership, Social Cohesion, and Cyber-security. The effectiveness of these guarantees hinges on robust governance, proactive risk management, sustained international cooperation, strategic adaptability, and a clear long-term vision. Table 3 provides a breakdown of the guarantees and mechanisms for NES.

**Table 3. Guarantees and mechanisms for NES**

Guarantee Areas	Core Mechanisms	Rationale/Impact on NES
Diversification and Resilience	Diversified export markets and supply chains	Reduces exposure to exporter-specific shocks; enhances ability to substitute suppliers.
	Strategic stockpiling of critical resources	Decreases dependence on foreign sources; ensures supply during emergencies; mitigates coercive leverage in geopolitics.
	Investing in resilient infrastructure	Ensures reliable functioning of critical sectors; prevents effects from incapacitation; acts as multi-domain defence; underpins all other security aspects.
Strategic Autonomy	Developing domestic technological capabilities	Reduces reliance on external powers in key tech areas; addresses risks from espionage/leakage of dual-use technologies.
	Reducing dependence on foreign countries in strategic sectors	Fosters greater self-sufficiency; promotes supply chain diversification; counteracts unfair.
	Implementing robust foreign investment screening	Strengthens defensive economic measures; prevents foreign control over critical assets/supply chains.
Financial Stability	Sound fiscal and monetary policies	Supports macroeconomic stability; fosters growth; creates buffers against shocks; ensures long-term fiscal sustainability
	Strong financial regulatory frameworks	Prevents flow of funds to illicit activities/terrorist groups; disrupts financial networks; protects global financial system integrity; promotes transparency/accountability.
	Effective crisis management mechanisms	Contains damage and limits impact on real economy; restores calm in financial markets; employs liquidity support.
Technological Leadership	Investing in R&D and innovation	Critical for competitive advantage and national defence; driven by "Big Tech" economies of scale; fostered by government support and public-private partnerships.
	Protecting intellectual property	Fundamental for innovation and national security; enables investment; empowers small businesses; drives tech leadership; counters IP theft/coercion.
	Attracting and retaining skilled labour	Essential for competitive economy; drives innovation, creates jobs, fills critical labour gaps; vital for Science, Technology, Engineering, and Mathematics fields; complements native workforce.
Social Cohesion	Implementing social safety nets	Protects individuals/households from economic risks/shocks; provides support during vulnerable periods; significantly reduces poverty; acts as economic stabilizer.
	Reducing income inequality	Positive relationship with economic growth and social institutions; improves development outcomes; reduces poverty disparities; increases future economic contributions.
	Promoting equitable access to essential services	Encompasses employment, education, resources, quality of life; ensures basic economic security; enables full participation in economy; fosters human capital development.

Continued

Guarantee Areas	Core Mechanisms	Rationale/Impact on NES
Cyber security	Robust cyber defence infrastructure	Ensures reliable functioning of critical infrastructure; protects national assets/systems; manages risks through industry-government collaboration.
	International cooperation on cyber-security	Builds capacity to defend against cyber incidents globally; enhances critical infrastructure security; shares threat information/best practices; fosters mutual trust.
	Strong national legislation regarding cyber-crime	Secures digital ecosystem benefits; protects information systems; regulates financial information handling; mandates incident reporting; shifts responsibility to capable organizations.

Source: Created by the author

### ***Costs for safeguarding NES***

Kilcrease (2024) while discussing the costs of modern NES policies highlights the trade-off between security and economic efficiency, noting that measures like “de-risking” supply chains can lead to higher prices, reduced innovation, and a less efficient global economy. The implementation of specific economic policy tools also incurs distinct costs like protectionist policies, such as tariffs and quotas; reduced economic efficiency and competitiveness, sanctions enforcement – governments must invest in robust data and analytical capabilities to identify and track evasion efforts, such as smuggling or illegal transshipment through third countries.

The preceding discussion on the fundamental elements defines the ‘what’ of NES. To understand its purpose and efficacy, we now shift our focus to the ‘why’ and ‘how well’ by examining the key aspects and desired outcomes that a secure national economy must achieve.

## **Key aspects and desired outcomes of NES**

Due to the restricted space of that paper I will discuss mainly the conceptual meaning and importance for the NES of these aspects and desired outcomes. Their sub-components will be mentioned only.

### ***Economic stability and growth: the bedrock of a secure macro-economy***

Stability and Growth form a critical and foundational aspect of NES. This aspect represents the overall health and predictability of the macroeconomic environment, providing the necessary bedrock upon which other aspects of NES are built. It refers to the sustained and predictable performance of a nation’s macro-economy, characterized by the absence of significant and disruptive volatility across key economic sectors. It is a state where conditions are conducive to long-term, non-inflationary growth in output



and employment, alongside the maintenance of price stability and sustainable fiscal and external balances. This stability fosters confidence among economic agents, facilitating investment, consumption, and long-term planning. Maintaining macroeconomic stability and promoting sustainable growth are not merely economic objectives but are fundamental prerequisites for a secure and prosperous nation. Dimitrov (2000) states that a nation's ability to maintain a healthy and growing economy is not just about prosperity but is foundational for its security.

The concept of Economic Stability and Growth is built upon several interconnected sub-components: Fiscal Sustainability, Monetary Policy Effectiveness, Price Stability, Exchange Rate Stability, and Sustainable Economic Growth.

***Economic resilience: the capacity to withstand and recover from shocks***

In an OECD working paper Caldera et al. (2015) define Economic Resilience as the capacity of a nation's economy to absorb, adapt to, and rapidly recover from a wide range of economic shocks, disruptions, and crises, whether these originate from domestic vulnerabilities or external challenges. Kooi (2025) provided a theoretical framework that explains why economic resilience is a vital and increasingly critical component of NES in an interconnected and volatile global landscape.

A resilient economy is characterized by its strength, flexibility, and adaptability, allowing it to weather storms that might cripple less robust systems. This includes not only the capacity to minimize the initial damage of a shock but also the speed and efficiency of the subsequent recovery, preventing temporary setbacks from becoming prolonged periods of economic hardship and insecurity. Economic resilience is not a singular attribute but rather a composite of several interconnected building elements that contribute to a nation's overall capacity to withstand and recover from shocks: Diversification of the Economy, Robustness of Critical Infrastructure, Supply Chain Security and Diversification, Financial Sector Stability and Redundancy, and Social Safety Nets and Adaptive Capacity.

***Sustainable development: economic progress without compromising the future***

Sustainable Development is a comprehensive and dynamic paradigm of economic progress that consciously integrates three interconnected dimensions: environmental sustainability, social equity and inclusion, and long-term economic viability. It represents a fundamental shift from purely quantitative measures of growth to a qualitative approach that prioritizes the well-being of both current and future generations by ensuring that present economic activities do not deplete natural capital, exacerbate social inequalities, or undermine the planet's life-support systems. Sachs (2015) argues that sustainable development is not just an environmental agenda but a comprehensive framework for addressing the interconnected challenges of economic prosperity, social inclusion, and environmental sustainability, all of which are crucial for long-term national security. Sustainable development is not merely an aspirational goal but a critical and increasingly recognized aspect of NES. A long-term, systemic approach to

sustainability, according to Sydorchuk et al. (2024), is necessary to address modern security challenges.

Sustainable Development is built upon a foundation of several interconnected and mutually reinforcing sub-components: Environmental Sustainability, Social Equity and Inclusion, Long-Term Economic Viability, Climate Change Adaptation and Mitigation, and Intergenerational Equity.

***Individual economic well-being: the economic security of citizens***

Individual Economic Well-being refers to the state of economic security, prosperity, and opportunity experienced by the individual citizens within a nation. It encompasses the degree to which individuals have stable and sufficient resources, access to essential goods and services, and the capacity for upward economic mobility, enabling them to meet their basic needs, pursue their aspirations, and participate fully in society without undue economic hardship or insecurity. Osberg and Sharpe (2002) expand the concept of economic well-being beyond GDP, arguing that it should include measures of income distribution and insecurity. It suggests that a nation's economic security is fundamentally tied to the economic security of its citizens. The security and prosperity of a nation are inextricably linked to the economic circumstances of its citizens. When individuals are economically secure, they are more likely to be productive members of society, contributing to overall economic growth and stability.

Individual Economic Well-being is a multifaceted concept built upon several interconnected sub-components: Employment Security, Income Security, Access to Essential Goods and Services, Financial Security of Households, and Opportunities for Economic Mobility.

***National economic competitiveness***

National Economic Competitiveness fundamentally refers to a nation's dynamic and evolving capacity to produce goods and services that simultaneously enables the sustained maintenance and progressive improvement of the real income and overall living standards of its citizens over the long term. This encompasses the ability to attract and retain investment, foster innovation, and adapt effectively to the ever-changing global economic landscape. A very recent study, published by the European Parliament (2025), argues that economic security has become a "first order" EU priority and proposes a plan, including the need to rebuild European competitiveness, as an important aspect and desired outcome of the NES policy.

National Economic Competitiveness is a multifaceted and dynamic attribute of a nation's economy, determined by a complex interplay of structural factors, policy choices, and inherent capabilities. It is a continuous process of adaptation and improvement. The key building elements that underpin a nation's economic competitiveness are: Innovation and Technology, Productivity, Human Capital, Efficient Markets, Favourable Business Environment, and Strategic Trade Policies.

The desired outcomes provide the ultimate goal for NES; achieving them, however, requires a functioning system. The next section moves from the strategic objectives to

the practical application, detailing the Components of NES that must be managed and secured on a daily basis.

## Components of NES

The components of NES are the specific economic areas or sectors that are vital for a nation's economic stability, prosperity, and strategic autonomy. These components are interconnected and contribute collectively to the overall economic security posture.

### ***Financial security***

As a component of NES Financial security extends beyond mere fiscal solvency or market stability. It represents a dynamic and multifaceted state wherein a nation's financial system possesses the inherent strength, adaptive capacity, and trusted integrity to consistently support sustainable economic activity, safeguard the wealth and well-being of its citizens, and enable the independent pursuit of national interests within a volatile global financial landscape. Andriichenko (2020) discusses the state's financial security as a component of NES and defines it as the state's capacity to respond promptly and adequately to internal and external financial shocks in both peacetime and emergencies.

Financial security refers to the comprehensive condition of a nation-state's financial architecture characterized by the sustained stability and robust resilience of its sovereign currency, the soundness and integrity of its banking sector, the efficiency and transparency of its capital markets, and the sustainability of its public finances. It includes a nation's enduring capacity to effectively manage its debt obligations, maintain control over inflationary pressures, foster an environment conducive to productive domestic and foreign investment, and sustain high levels of confidence among both domestic and international economic actors in the reliability and trustworthiness of its financial institutions and policies.

The overarching concept of Financial Security is constructed from several interconnected and mutually reinforcing building elements: Monetary Stability, Fiscal Prudence, Financial System Resilience, and Capital Flows.

### ***Supply chain security***

In an increasingly interconnected global economy, the movement of goods, services, and raw materials forms the invisible arteries of national prosperity and strategic capability. Supply chain security has emerged as a paramount concern for NES transcending traditional notions of logistics to encompass a comprehensive and strategic approach to safeguarding these vital flows. Hanna Scott (2022), while examining the critical role of supply chains in modern economic security noted that a nation's ability to maintain stable access to goods and technologies is a core security concern.

The ultimate objective of the Supply Chain Security is to prevent disruptions from escalating into national crises and to uphold sovereign capacity. It is about

ensuring the continuous functioning of a nation's economy and its ability to respond to crises and maintain independence in a volatile world. It involves the systematic identification of vulnerabilities across global and domestic supply networks, the strategic implementation of measures to diversify sources and routes, and the active development of resilience and redundancy mechanisms to mitigate and recover from a wide spectrum of disruptions.

The comprehensive nature of Supply Chain Security is understood through its integral building elements, each addressing a critical facet of ensuring uninterrupted flows: Critical Infrastructure, Strategic Goods and Materials, Diversification of Sourcing, and Resilience and Redundancy.

### ***Technological and innovation security***

In the 21st century, the very fabric of national power and prosperity is increasingly woven from threads of technological prowess. Technological and Innovation Security has emerged as a defining component of NES, including a nation's capacity to create, control, and leverage cutting-edge technologies that are fundamental to its economic growth, its defensive capabilities, and its influence on the global stage.

Technological and Innovation Security refers to a nation's comprehensive capacity to proactively develop, rigorously protect, and strategically leverage advanced and emerging technologies, along with their underlying intellectual property. This dynamic capability involves fostering a vibrant culture of innovation through robust research and development, safeguarding critical technological assets and know-how from espionage, theft, or unauthorized appropriation, and actively cultivating and maintaining technological leadership in sectors deemed vital for national interests and future prosperity. Tyson and Guile (2025) suggested that technological and innovation security is now integral to economic security. It is a domain where economic vitality, national defence, and strategic autonomy converge, demanding a comprehensive and forward-looking approach.

The holistic pursuit of Technological Security and Innovation is built upon several interconnected and mutually reinforcing elements: Research and Development (R&D), Intellectual Property Protections, Critical Technology Control, Cyber-security, and Emerging Technologies.

### ***Energy and resource security***

In the contemporary global landscape, the assured availability of energy and vital natural resources stands as a non-negotiable prerequisite for national prosperity, industrial strength, and strategic autonomy. Energy and Resource Security refers to the comprehensive safeguarding and assured availability of essential energy and natural resources, strategically important manufactured materials and other vital natural resources that are indispensable for powering its economic activity, sustaining the well-being of its population, and safeguarding its national interests.

This involves a proactive and continuous effort to manage domestic reserves, diversify sources, cultivate domestic production capabilities, promote efficient

consumption, and mitigate the complex geopolitical, economic, environmental, and technological risks associated with energy and resource supply and demand. Chekushina and Pakhomova (2021) maintain that Energy and Resource Security is fundamental domain of NES underlying that access to reliable, affordable, and sustainable inputs of energy and other critical natural resources is foundational to a nation's economic activity, the welfare of its population, and its capacity to act independently on the international stage.

The holistic pursuit of Energy and Resource Security is a complex endeavour, built upon several interconnected and mutually reinforcing elements: Energy Supply Diversity, Strategic Reserves, Domestic Production Capacity, Energy Efficiency and Conservation, and Climate Resilience.

### ***Food security***

Food, the most fundamental human necessity, underpins not only individual survival but also societal stability and national economic vitality. Food security is a critical component of NES, extending beyond mere calorie intake to encompass the complex interplay of production, access, and nutrition. A foundational document of the World Food Summit (1996) defines food security as a state when all people, at all times, have physical and economic access to sufficient, safe and nutritious food implicitly linking it to national economic security.

Food security refers to a nation's enduring capacity to ensure that all its citizens, at all times, have consistent, reliable, and equitable physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences. This comprehensive objective involves maintaining robust domestic agricultural capacity, fostering resilient and efficient food supply chains, developing effective and inclusive distribution mechanisms, and implementing proactive measures to mitigate a wide array of threats to food availability, access, utilization, and stability.

Erosion of Food security through agricultural failures, supply chain disruptions, over-dependence, or unmanaged environmental impacts, directly translates into economic decline, reduced strategic autonomy, and heightened social vulnerability, accelerating the transition to a dangerous state of national economic insecurity.

Achieving and maintaining Food Security is a dynamic and multi-layered challenge, requiring strategic attention to several interconnected building elements: Agricultural Productivity, Food Supply Chain Resilience, Food Imports and Exports, and Food Quality and Safety.

### ***Human capital and labour market security***

In the modern knowledge-based economy, a nation's most valuable asset is its people. Human Capital and Labour Market Security as a component of NES, recognizes that a skilled, adaptable, healthy, and engaged workforce is the ultimate driver of innovation, productivity, and sustained economic competitiveness. Human Capital and Labour Market Security is available when a nation's comprehensive and sustained ability to develop, attract, and retain a skilled, knowledgeable, adaptable, and healthy workforce

that is indispensable for fostering economic competitiveness, driving innovation, and ensuring social cohesion. This involves strategic and continuous investments across the entire human lifecycle, including high-quality education and vocational training, agile labour market policies promoting flexibility and re-skilling, universal access to comprehensive healthcare, and robust social safety nets. Bar-El et al. (2020) argued that there is a direct link between a nation's human capital and its capacity to achieve national security; investing in human capital through education and training is a key long-term investment in a nation's economic and military strength. The erosion of it through skill deficits, job insecurity, brain drain, or unmanaged technological impacts, directly translates into a decline in economic competitiveness, strategic autonomy, and social stability, accelerating the transition to a dangerous state of national economic insecurity.

The achievement of Human Capital and Labour Market Security is contingent upon the synergistic strength and effective functioning of several interconnected building elements: Education and Skills Development, Labour Market Flexibility, Healthcare and Social Safety Nets, and Talent Attraction and Retention.

### ***Security of critical infrastructure***

The Security of Critical Infrastructure is another fundamental component of NES. Kris Hemme (2015) wrote that the security of a nation's critical infrastructure, from power grids and transportation to banking and communications systems, is a basic component of its national security. It is a comprehensive safeguarding and assured availability of the vital physical and digital systems that underpin a nation's sustained economic functioning, the well-being of its populace, and the preservation of its national sovereignty. Proactive measures are needed to protect these interconnected systems against a spectrum of threats, including natural disasters, geopolitical instability, malicious attacks, systemic failures, and economic coercion, ensuring their continuous operation and resilience.

The security of critical infrastructure is a constellation of interconnected imperatives, each addressing a specific domain vital for a modern economy and society. Critical Infrastructure Domains include, but are not limited to Transportation Networks, Communication Networks, Financial Networks, Energy Grids, Healthcare Systems and Emergency Services.

## **National economic security policy**

The preceding sections established the theoretical groundwork by identifying the basic characteristics, fundamental elements, key aspects and desired outcomes, and components of NES. To translate this conceptual understanding into practical national strategy, we now transition to examining NES Policy (NESP) – the deliberate mechanisms used to manage and integrate these components. In the present section, the necessary

governance structure and political instruments required to safeguard and advance the economic well-being of the nation are analysed.

In the centre of economic policies of governments around the world is the desire of the states to achieve and maintain the security of the economic objects that they deem valuable. States act to protect their access to vital resources, secure their trade routes, stabilize financial markets, and promote their overall economic well-being. Their foreign economic policies, including trade agreements, investment regulations, and diplomatic initiatives, are all ultimately aimed at enhancing their economic security by safeguarding the objects and interests that they consider essential and valuable.

The essence of NESP is to find the best possible and the most effective ways and means to achieve successful, reliable protection of the national economic interests from the existing threats and dangers. NESP operates across two major interconnected levels: national and international. While distinct, these levels are deeply intertwined, with developments at one level profoundly impacting the other.

NESP can be defined as the integrated framework of strategic objectives, legislative mandates, and operational instruments adopted by a nation-state to safeguard and advance its key socio-economic interests, including prosperity, stability, and sovereignty against internal and external threats, vulnerabilities, and disruptions. It aims to ensure the continuous functioning of critical economic systems, protect national assets, secure vital resources and supply chains, and ultimately uphold the economic well-being and resilience of its citizens and institutions in an evolving global landscape.

The NESP is not merely a collection of economic regulations; it is a meta-policy that fundamentally integrates economic considerations with national security imperatives. It is a shift from traditional, economic policy (focused primarily on growth, inflation, and unemployment) and traditional security policy (focused on military defence) towards a holistic, interdisciplinary approach.

### ***Elements of the NESP***

An effective NESP is composed of several interlocking elements, each contributing to the overall security posture:

*Strategic Intelligence and Foresight:* Continuous monitoring, analysis, and interpretation of global and domestic economic, technological, geopolitical, and environmental trends to identify nascent threats, emerging vulnerabilities, and strategic opportunities. It is about proactive horizon scanning and scenario planning to anticipate potential shocks and disruptions before they materialize.

*Legislative and Regulatory Frameworks:* NESP is codified through national laws and regulations that govern areas such as foreign investment screening, critical infrastructure protection, export controls on sensitive technologies, cyber-security standards for economic actors, and anti-money laundering measures. These frameworks provide the legal basis for policy interventions.

*Capacity Building and Resilience Investment:* Focuses on actively strengthening the underlying structural components of the economy to enhance its ability to withstand,



adapt to, and recover from shocks. This includes investments in diverse and robust supply chains, resilient physical and digital infrastructure, a diversified industrial base, and robust financial systems.

*Human Capital Development:* Policies supporting education, vocational training, continuous re-skilling, and equitable access to healthcare, ensuring that the labour force can drive innovation and adapt to economic shifts.

*Technological Autonomy and Leadership:* Policies to foster domestic R&D, protect intellectual property, attract and retain top talent, and strategically manage technological dependencies to avoid foreign coercion or denial of access.

*International Engagement and Diplomacy:* Multilateral cooperation, bilateral alliances, participation in international standard-setting bodies, and economic diplomacy aimed at shaping a stable and predictable global economic order, mitigating shared risks, and countering hostile economic practices.

*Crisis Preparedness and Response Protocols:* Developing detailed contingency plans for various scenarios (e.g., financial crisis, supply chain disruption, cyber-attack), establishing clear command-and-control structures, and ensuring rapid access to emergency resources.

#### ***Basic mechanisms and instruments***

McCaffrey and Poitiers (2024) discussed the various policy instruments used to advance economic security, including investment screening, export controls on critical technologies, etc. Hence, the implementation of NESP relies on a diverse set of mechanisms and instruments:

*Macroeconomic Policy Coordination:* Harmonizing fiscal, monetary, and exchange rate policies to maintain stability and create buffers against shocks (e.g., maintaining healthy foreign exchange reserves, sustainable public debt).

*Strategic Sectorial Policies:* Targeted government support (subsidies, tax incentives, preferential procurement) for industries deemed critical for national security (e.g., defence, semiconductors, pharmaceuticals, and rare earths).

*Trade and Investment Screening Mechanisms:* Specialized governmental bodies that review inbound foreign investments and outbound technology transfers for national security implications.

*Export Controls and Sanctions Regimes:* Legal instruments to restrict the export of sensitive technologies or goods to hostile entities, and the imposition of economic sanctions against states or actors engaging in behaviour deemed detrimental to national interests.

*Public-Private Partnerships (PPPs):* Collaborative initiatives between government and industry to share risks and resources in areas like critical infrastructure development, cyber-security, and R&D for strategic technologies.

*Intellectual Property Protection and Enforcement:* Robust legal frameworks and active enforcement mechanisms to safeguard domestic innovations from theft and unauthorized use.

*Cyber-security Frameworks and Information Sharing:* National cyber-security agencies, reporting of breaches for critical infrastructure, and information-sharing platforms between government and private entities.

*Economic Diplomacy and Coercion Tools:* Utilizing diplomatic channels to shape international economic norms, negotiate beneficial trade agreements, and, when necessary, employ economic leverage or countermeasures against adversarial economic practices.

### **Objectives**

In 2023 the G7 Leaders' Statement on Economic Resilience and Economic Security outlined the modern objectives of economic security from the perspective of the leading nations: to ensure economic resilience, counter economic coercion, and prevent the leakage of critical technologies to adversaries (G7, 2023). The overarching objectives of NESP are multi-layered and interconnected:

*Protecting National Prosperity:* Ensuring sustained economic growth, high employment, and rising living standards for citizens.

*Enhancing Economic Resilience:* Building the capacity to withstand, adapt to, and rapidly recover from internal and external economic shocks and disruptions.

*Safeguarding Strategic Autonomy:* Reducing undue dependence on foreign powers for critical goods, services, technologies, and financial flows, particularly in areas vital for national defence and societal functioning.

*Maintaining Financial Stability:* Preventing systemic financial crises and ensuring the robust functioning of the national and international financial systems.

*Securing Critical Supply Chains:* Ensuring uninterrupted access to essential goods, components, and raw materials required for national industries and citizen well-being.

*Fostering Technological Leadership:* Ensuring a nation's competitive edge and sovereign capabilities in key and emerging technologies.

*Upholding Social Cohesion:* Mitigating economic inequalities and ensuring social safety nets that prevent economic distress from escalating into widespread social and political instability.

*Countering Geoeconomic Coercion:* Developing capabilities to resist or deter attempts by other states to use economic means to undermine national interests.

### **NESP and the National Economic Policy (internal and international)**

NESP *recalibrates and integrates* all aspects of national economic policy, both internal and international. It inserts in the economic policy imperative security criteria.

#### **Internal Economic Policy**

*Investment Prioritization:* NESP necessitates prioritizing public and private investment not just for economic return, but for strategic security objectives (e.g., funding R&D in critical technologies, building resilient infrastructure, bolstering domestic production in key sectors, rather than solely relying on cost-efficiency).

*Regulatory Design:* Regulations that enhance economic security are added to the ones concerned with market efficiency.

*Human Capital Strategy:* Education and labour focusing on skills development relevant to strategic industries and fostering an adaptable workforce.

*Fiscal Prudence:* Fiscal policy needs to build sufficient buffers (e.g., emergency reserves, manageable debt levels) to enable counter-cyclical spending during shocks without compromising long-term stability.

*Industrial Policy Revival:* NESP reintroduces the concept of targeted industrial policies for strategic sectors, moving beyond a purely free-market approach to ensure sovereign capabilities.

#### International Economic Policy

*Trade Policy:* Trade agreements are evaluated not just for market access but also for their impact on supply chain resilience, strategic dependencies, and potential for economic coercion. Diversification of trade partners becomes a security imperative.

*Investment Policy:* Outbound and inbound investment policies are screened through a security lens, restricting or encouraging flows based on strategic national interests.

*Multilateral Engagement:* Active participation in global economic governance bodies is seen as critical for shaping norms that promote collective economic security and counter adversarial economic practices.

*Development Aid/Cooperation:* Aid can be strategically deployed to build resilience in partner nations, particularly those vital for secure supply chains or regional stability.

*Sanctions and Counter-Coercion:* NESP provides the framework for using economic tools (sanctions, tariffs, export controls) as instruments of foreign policy and national defense, recognizing their Geoeconomic utility.

In essence, NESP transforms national economic policy from a purely “economic” domain into a Geoeconomic domain, where every economic decision is evaluated for its contribution to national economic security.

A report by Armstrong et al. (2022) argues that Australia’s economic strength and its national security are inseparable, so economic policy and security strategy must be designed together rather than treated as a trade-off between prosperity and safety. The authors contend that Australia’s priority should be to reinforce and update an open, rules based multilateral economic order and to use economic tools—trade policy, investment rules, infrastructure and financial cooperation, and digital and climate related frameworks—as central instruments of statecraft to secure both national prosperity and security.

Table 4. Levels of NES and NESP dimensions

Levels of Economic Security	Objectives	Strategies	Instruments and Mechanisms	Outcomes
National (Macroeconomic)	<ul style="list-style-type: none"> <li>• Sustained growth</li> <li>• Macro-economic stability</li> <li>• Systemic resilience</li> <li>• Strategic autonomy</li> </ul>	<ul style="list-style-type: none"> <li>• Diversification (trade, industry, energy)</li> <li>• Fiscal prudence</li> <li>• Innovation-driven growth</li> <li>• Global economic diplomacy</li> </ul>	<ul style="list-style-type: none"> <li>• Fiscal/monetary policy</li> <li>• Trade agreements</li> <li>• R&amp;D funding</li> <li>• FDI screening</li> <li>• Investments in critical infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced GDP volatility</li> <li>• Balanced budget/sustainable debt</li> <li>• Global competitiveness</li> <li>• Enhanced sovereign capability</li> </ul>
Key Economic Sectors	<ul style="list-style-type: none"> <li>• Sectorial resilience</li> <li>• Supply chain security</li> <li>• Tech leadership</li> <li>• Talent retention</li> </ul>	<ul style="list-style-type: none"> <li>• Targeted industrial policy</li> <li>• Domestic production incentives</li> <li>• Workforce development</li> <li>• Intellectual Property (IP) protection</li> <li>• Sector-specific R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>• Subsidies/tax breaks</li> <li>• Strategic stockpiling</li> <li>• Sector-specific regulations</li> <li>• Export controls</li> <li>• Public-Private Partnerships (PPPs)</li> </ul>	<ul style="list-style-type: none"> <li>• Minimized sectorial disruptions</li> <li>• Secure supply chains</li> <li>• Advanced domestic capabilities</li> <li>• Skilled labour pool</li> </ul>
Key Industries	<ul style="list-style-type: none"> <li>• Competitiveness</li> <li>• Cyber-security</li> <li>• Innovation capacity</li> <li>• Resilience to specific shocks</li> </ul>	<ul style="list-style-type: none"> <li>• Cyber-security mandates</li> <li>• Workforce training</li> <li>• Market access facilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Research grants</li> <li>• Cyber-security certifications</li> <li>• Skills training programs</li> <li>• Export promotion programs</li> <li>• Anti-monopoly laws</li> </ul>	<ul style="list-style-type: none"> <li>• Increased market share</li> <li>• Reduced cyber-attack frequency and impact</li> <li>• New product development</li> <li>• Robust industry associations</li> </ul>
Business Corporations	<ul style="list-style-type: none"> <li>• Operational continuity</li> <li>• Risk management</li> <li>• Supply chain robustness</li> <li>• Data security</li> </ul>	<ul style="list-style-type: none"> <li>• Diversifying suppliers</li> <li>• Implementing Business Continuity Plans (BCPs)</li> <li>• Cyber hygiene</li> <li>• Employee training</li> <li>• Ethical sourcing</li> </ul>	<ul style="list-style-type: none"> <li>• Risk management frameworks</li> <li>• Cyber-security protocols</li> <li>• Compliance programs</li> <li>• Insurance</li> <li>• Internal audits</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced business interruption</li> <li>• Enhanced investor confidence</li> <li>• Protection of proprietary data</li> <li>• Ethical business practices</li> </ul>
Citizens	<ul style="list-style-type: none"> <li>• Economic well-being</li> <li>• Social equity</li> <li>• Access to essential services</li> <li>• Financial literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Robust social safety nets</li> <li>• Equitable education/healthcare</li> <li>• Consumer protection</li> <li>• Financial literacy programs</li> </ul>	<ul style="list-style-type: none"> <li>• Unemployment benefits</li> <li>• Affordable healthcare</li> <li>• Public education funding</li> <li>• Consumer protection laws</li> <li>• Financial education curricula</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced poverty/inequality</li> <li>• Improved health</li> <li>• Enhanced human capital</li> <li>• Greater financial stability</li> </ul>

Source: Created by the author

### ***Costs-benefits optimization of the NESP***

The Relationship between Costs and Benefits of the NES policy involves the costs of governmental actions designed to safeguard beneficial NES; it is a subject to the law of diminishing returns, meaning that when the marginal cost of security rises, the marginal benefit falls. As the level of economic security increases, each additional measure becomes progressively more expensive and delivers a smaller incremental gain in security. Costs include direct financial outlays (subsidies, R&D funding, infrastructure investment), higher consumer prices due to protectionism (tariffs, “friend-shoring”), reduced market efficiency, and potential retaliation from foreign partners. Benefits are generally all the NES policy desired outcomes as discussed previously in the paper.

The NES security policy is considered optimised when its level is set at the point where the marginal benefit of the last security measure implemented is precisely equal to its marginal cost.

At this optimal point, the nation has achieved the most efficient allocation of resources—any further investment in NES would cost more than the value of the security it provides, and any reduction in security would sacrifice benefits worth more than the cost saved. The optimal level is a crucial balancing act between ensuring vital national interests are protected (security) and avoiding unnecessary economic inefficiency or loss of opportunities from global trade and specialization (efficiency). While a solid and effective NESP is critical for the present, economic security is a dynamic, forward-looking challenge. The following section discusses the emerging threats and opportunities.

## **Navigating the future of NES**

### ***Emerging trends and long-term strategies: shaping the future landscape***

The future trajectory of NES and NESP is already shaped by an intricate interplay of several interconnected and powerful emerging trends. Their role in the future only could be expected to grow. These trends represent opportunities for enhanced prosperity and significant vectors of vulnerability and disruption, demanding sophisticated long-term strategies for effective navigation.

### ***The accelerating pace of technological disruption***

Rapid, exponential advancements in fields such as artificial intelligence (AI), machine learning, advanced automation, quantum computing, biotechnology and novel materials are fundamentally altering the global economic landscape. This disruption transcends mere efficiency gains, instigating a paradigm shift in production processes, supply chain architectures, labour market dynamics, and international competitive advantages. In a paper published by the Center for a New American Security (CNAS) Kilcrease (2024) examines how rapid technological innovation, particularly in areas like artificial intelligence and quantum computing, is at the core of the new economic security problems.

### ***Deepening global interdependence and geopolitical fragmentation***

The past decades have witnessed the proliferation of complex Global Value Chains (GVCs) and an unprecedented degree of economic interconnectedness, fostering substantial economic growth and efficiency. However, this deepening interdependence simultaneously creates systemic vulnerabilities to disruptions stemming from escalating geopolitical tensions, protectionist trade disputes, and the deliberate “weaponization” of economic linkages (e.g., export controls, sanctions, or supply chain blockades).

The emerging multipolarity and increasing strategic competition among major global powers necessitate a better, meticulously nuanced approach to international economic engagement. Aiyar et al. (2023) pointed to the shift from global integration to policy-driven Geoeconomic fragmentation and analysed how rising geopolitical tensions and trade restrictions are reversing decades of globalization, impacting trade, migration, capital flows, and technology diffusion.

### ***Escalating threat of climate change***

The multifaceted impacts of climate change pose existential threats to long-term economic stability and prosperity. These physical and transition risks translate directly into economic disruptions, affecting agricultural output, infrastructure integrity, human health, and financial market stability. CNA Corporation Military Advisory Board in a landmark publication framed climate change as a “threat multiplier” leading to political instability, resource conflicts, and humanitarian crises (CNA Military Advisory Board, 2014).

### ***Demographic shifts and social transformations***

Profound demographic shifts, such as rapidly aging population in many developed and some developing regions, coupled with significant rapid population growth in others, are fundamentally reshaping global labour markets, consumption patterns, and the long-term solvency of social welfare systems (e.g., healthcare, pensions). Nichiporuk (2000) in a key reference work, explored the relationship between demographic trends and security, highlighting how factors like rapid urbanization, migration, and declining fertility rates can strain economic systems and increase the risk of internal and interstate conflict.

### ***The rise of cyber threats***

The accelerating digitalization of virtually all economic and societal functions has created an expansive and increasingly porous attack surface for malicious cyber activities. Cyber threats, emanating from state-sponsored actors, criminal syndicates, and non-state groups, pose a severe and escalating risk to economic stability and national security. These threats manifest as data breaches, ransom ware attacks, intellectual property theft, disruption of critical services, and systematic disinformation campaigns. A World Economic Forum report (2025) provided a forward-looking analysis of the evolving cyber threat landscape. It exposed how the increasing sophistication and scale of cyber-attacks, driven by generative AI and other technologies, pose a direct threat to economic security.

## **Comprehensive and dynamic NES (CDNES) concept**

The last part is the culmination of this paper exploration, synthesizing the preceding discussions on NES and NESP and projecting a forward-looking perspective on how nations can bolster their economic security amidst the unfolding complexities of the 21-st century. It underscores the imperative for a comprehensive, proactive, agile, and adaptive stance in the face of dynamic global transformations, asserting that future economic security hinges not on maintaining a static state, but on mastering dynamic change. It represents a proposal for a new Comprehensive and Dynamic NES Concept. I see it as a “superstructure” of the NES concept, developed earlier in the text, with all of its basic characteristics, fundamental elements, components, key aspects, desired outcomes, policies, and practical frameworks.

### ***The meaning of CDNES concept***

CDNES is a holistic, systemic, and adaptive approach to safeguarding a nation’s sustained capacity for economic prosperity, resilience, and strategic autonomy within a constantly evolving and often unpredictable global landscape. It fundamentally emphasizes continuous processes of anticipation, adaptation, resilience building, strategic foresight, and the proactive fostering of inclusive and sustainable development, both domestically and internationally. Its ultimate aim is to ensure long-term economic well-being and the agility to respond effectively to emergent threats and opportunities, ultimately – transforming potential vulnerabilities into sources of competitive advantage.

CDNES transcends traditional, often static, conceptions of economic security by recognizing the inherent fluidity, complex interdependencies, and non-linear dynamics of the 21st-century global economy. Its core tenet is that economic security is not a fixed, achievable state to be attained and maintained through rigid, static measures, but rather an ongoing, iterative process that demands continuous adaptation, strategic agility and systemic learning.

The Comprehensive and Dynamic approach to NES is new, not yet discussed as a concept by other scholars. The concepts of “comprehensive NES” and “dynamic NES” have been discussed as separate, characteristics of NES. The combination of “Comprehensive and Dynamic” approach is a powerful and accurate summation of the current objective direction of NES.

### ***Building elements***

The following discussion on the building elements of the CDNES provides a comprehensive conceptual framework for understanding, implementing, and continually refining this forward-looking approach to national economic statecraft.

#### **Moving beyond static conceptions**

Traditional approaches to NES frequently focused on maintaining a specific, often historical, level of economic output (e.g., fixed GDP growth targets), protecting established domestic industries through protectionist tariffs or subsidies, or ensuring absolute self-sufficiency in a narrow set of key sectors. While such elements may retain residual tactical relevance in specific contexts, CDNES could overcome their limitations and potential



counter-productivity in a global environment characterized by relentless technological change, intricately woven global value chains, and unforeseen systemic disruptions.

Relying solely on static measures fosters rigidity, impedes a nation's capacity for necessary structural adaptation to new economic realities, and paradoxically renders it more vulnerable to unforeseen shocks by limiting diversification and innovation. CDNES represents a profound cognitive shift, moving away from a defensive posture of merely preserving the status quo, towards actively embracing change and proactively building systemic, self-renewing resilience.

#### Embracing resilience and adaptability

A foundational cornerstone of CDNES is the proactive, simultaneous cultivation of both intrinsic resilience and dynamic adaptability within the national economic system. These two concepts are mutually reinforcing and crucial for navigating a volatile future.

The proactive cultivation of intrinsic resilience and dynamic adaptability is not merely a defensive measure but the central strategic mind-set of the CDNES concept. These two qualities transform the national economy from a static target into a self-repairing, self-optimizing system capable of thriving amid global volatility.

It is the capacity of the economic system to absorb a shock, resist failure, and quickly rebound to its pre-crisis state; the ability to bend without breaking, to change its structure, processes, and core activities in response to changes in the environment (e.g. climate change, new technologies, geopolitical power shifts). It is the ability to learn and evolve.

#### Prioritizing strategic foresight

CDNES places a strong, systemic emphasis on strategic foresight, which transcends conventional short-term planning. It involves the systematic process of anticipating potential future challenges and emergent opportunities. This necessitates:

*Continuous monitoring:* Rigorous, perpetual scanning of global trends to detect weak signals and emerging patterns.

*Rigorous risk assessment:* Systematic identification and analysis of potential vulnerabilities and points of failure within the economic system, both internal and external.

*Scenario planning:* Structured development and exploration of multiple plausible future possibilities.

*Flexible policy frameworks:* The design of adaptable policy instruments and legislative structures that can be rapidly adjusted and recalibrated as new information emerges or as future events become clearer.

Strategic foresight allows nations to move beyond a reactive stance, enabling them to actively shape the future economic landscape in a manner that fundamentally enhances their long-term economic security.

#### Fostering inclusive and sustainable development

For CDNES the long-term economic security is inextricably and causally linked to both robust social equity and environmental sustainability. Neglecting these dimensions renders any economic security strategy fragile and ultimately unsustainable.

*Inclusive Development:* Benefits of economic growth and technological advancement are equitably shared across all segments of society. A highly unequal society is inherently vulnerable to social unrest, political instability, and diminished public trust, which can severely undermine economic functionality and resilience.

*Sustainable Development:* This entails embedding economic practices and policies that rigorously protect the natural environment and conserve critical natural resources for current and future generations.

Failing to prioritize inclusive and sustainable development can lead to cascading failures: social unrest can deter investment, environmental degradation can deplete economic assets, and both can ultimately erode the very foundations of long-term economic security.

#### Promoting international cooperation

While safeguarding core national interests remains an immutable objective, CDNES promotes cooperative actions by the international community to effectively solve a significant number of the most pressing emerging economic challenges, which are global or transnational in nature and cannot be effectively addressed by any single nation acting in isolation.

The international cooperation includes:

*Maintaining a stable and open international economic order:* Working collaboratively with other nations to uphold and evolve a global trading system, ensure stable financial markets, and prevent protectionist policies that could trigger global economic instability.

*Reducing systemic risks:* Collaborating on identifying and mitigating systemic risks in the global financial system, addressing sovereign debt crises, and strengthening global financial safety nets.

*Addressing shared global challenges:* Fostering international collaboration on critical transnational issues such as climate change, pandemic preparedness and response, cybersecurity, and counter-terrorism financing.

*Fostering equitable global economic governance:* Advocating for and building more inclusive and representative global economic governance structures that reflect the evolving distribution of economic power, ensuring broader legitimacy and effectiveness in addressing global challenges.

Multilateralism, strategic alliances, and bilateral partnerships are the way to enhancing collective economic security, sharing burdens, leveraging diverse capabilities, and building a more predictable and stable global economic environment for all participants. Actively developing more economic cooperation among nations instead of economic confrontations, including economic wars, is more beneficial for the security of the global economy, and – for the NES of all countries.

By embracing the principles of CDNES and proactively implementing long-term, adaptive strategies that address the intricate interplay of powerful emerging trends, nations can equip themselves not merely to survive but to thrive amidst the inevitable uncertainties and disruptions of the 21st century global economy. This empowers them to chart a course towards a more secure, prosperous, and genuinely sustainable future for all their citizens.

## Conclusion

The challenge of securing the national economy in the 21st century demands a fundamental philosophical shift: moving away from the static, protective, and partial approaches that have traditionally defined the concept. This study provides the necessary **Comprehensive and Dynamic National Economic Security (CDNES) conceptual model** to empower policymakers with the knowledge to manage this complexity.

The CDNES model is grounded in a systemic vision, analyzing the phenomenon's **dynamic and organic nature** and its multi-level manifestation across the economy. The research discussed its core components, key elements, and policy framework, specifically emphasizing the indispensable interdependence **between national resilience and effective international cooperation** to address systemic global risks.

In an era defined by profound Geoeconomic, Geopolitical, Technological and other transformations, successfully navigating the rapidly evolving global environment requires adopting this deliberate philosophical shift. Implementing the CDNES model is not merely an optional strategy but has become an imperative for safeguarding a nation's strategic interests and ensuring sustainable prosperity.

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