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Toward a New Marketing Paradigm: The Shared Passion Model (SPM) as a Conceptual Framework for Explaining Extraordinary Commercial Success.

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Abstract.

Contemporary marketing theories have extensively demonstrated the importance of understanding consumers' needs and preferences in order to build sustainable competitive advantages. Nevertheless, numerous business cases reveal that certain organizations achieve extraordinary levels of customer loyalty, differentiation, and profitability that appear to exceed the explanatory power of traditional customer-centered marketing models.

This article develops the Shared Passion Model (SPM), a conceptual framework proposing that extraordinary commercial success emerges when a high degree of correspondence exists between an organization's symbolic identity and the cultural identity of the community surrounding it. Rather than viewing the firm as an external agent that merely interprets market preferences, the model argues that the most successful organizations operate as legitimate members of the communities they represent.

The SPM is structured around five interrelated dimensions: leadership authenticity, symbolic identity, shared passion, strategic coherence, and organic community growth. Together, these dimensions explain how the creation of shared symbolic value promotes sustainable differentiation, strengthens consumer loyalty, and reduces competition based exclusively on price.

The article presents a conceptual development grounded in the literature on marketing, branding, competitive strategy, consumer behavior, and differential psychology. Finally, it proposes future research directions aimed at empirically validating the model across different industries and cultural contexts.

The article is not intended to replace classical customer-oriented marketing models but rather to complement them through a relational perspective that incorporates authenticity and shared identity as explanatory mechanisms of extraordinary commercial success.

Keywords: Strategic marketing; branding; symbolic identity; authenticity; consumer communities; competitive advantage; Shared Passion Model (SPM).

Palabras Clave:

marketing estratégico; branding; identidad simbólica; autenticidad; comunidades de consumidores; ventaja competitiva; Shared Passion Model (SPM).

1. Introduction.

Why do some organizations succeed in building extraordinarily loyal communities while others, despite offering comparable products, fail to generate the same level of emotional identification?

Over the past several decades, customer orientation has become one of the most influential principles in both marketing theory and practice. Understanding consumer needs, accurately segmenting markets, and developing differentiated value propositions have consistently proven to be fundamental strategies for enhancing organizational competitiveness (Kotler & Keller, 2016).

However, the evolution of contemporary markets raises a question that remains only partially answered. Certain organizations generate exceptional levels of commitment, loyalty, and recognition even when their products face functionally equivalent alternatives and, in many cases, command substantially higher prices. Brands such as Apple, Ferrari, Rolex, LEGO, and Harley-Davidson illustrate how some companies are able to cultivate communities that transcend the traditional relationship between producer and consumer.

Conventional explanations attribute these outcomes to factors such as innovation, market positioning, brand equity, or perceived quality. Although these factors are undoubtedly important, they do not fully explain why certain organizations evolve into cultural icons while others, despite employing similar marketing tools, remain ordinary market competitors.

This article is based on the premise that extraordinary commercial success depends not only on understanding consumers but also on the degree of authenticity with which an organization embodies the culture, values, and aspirations of the community to which it belongs.

Building upon this premise, the Shared Passion Model (SPM) is developed as a conceptual framework that explains the organization–consumer relationship from a relational perspective. The model argues that the creation of shared symbolic value constitutes a fundamental mechanism for explaining the emergence of competitive advantages that are difficult to imitate, as well as the formation of communities displaying exceptional commitment toward particular brands.

Accordingly, the objective of this research is to develop a conceptual framework that complements traditional marketing models by introducing shared passion as the central construct for explaining extraordinary commercial success.

2. Literature Review.

2.1 Customer Orientation as the Foundation of Modern Marketing.

What do current theories explain effectively, and what are their limitations in understanding extraordinary commercial success?

Customer orientation represents one of the conceptual pillars of contemporary marketing. Since the seminal contributions of Philip Kotler, the primary objective of marketing strategy has been to identify customer needs, understand consumer behavior, and develop value propositions that outperform those of competitors (Kotler & Keller, 2016).

This paradigm profoundly transformed managerial practice by shifting the focus from the product to the consumer. Market segmentation, competitive positioning, and marketing research demonstrated that business success depends largely on an organization's ability to satisfy genuine customer needs more effectively than competing firms.

However, the customer-centric paradigm implicitly assumes that consumer preferences constitute the primary starting point of marketing strategy. Although this perspective successfully explains numerous market phenomena, it becomes less precise when attempting to understand organizations that not only respond to existing consumer preferences but also actively participate in shaping new cultural identities and consumption communities.

In such cases, the organization ceases to function merely as an observer of the market and instead becomes an influential actor capable of shaping how consumers interpret particular symbols, lifestyles, and shared experiences.

2.2 Brand Equity and Brand Identity.

Brand equity theories developed by Aaker (1991) and Keller (1993) significantly expanded the understanding of consumer behavior by demonstrating that brands possess intangible assets capable of generating sustainable competitive advantages. Concepts such as brand awareness, brand associations, perceived quality, and customer loyalty explain why certain products maintain privileged market positions even when competing against technically comparable alternatives.

These contributions represent one of the most significant advances in the contemporary branding literature. Nevertheless, they primarily focus on describing the outcomes of brand equity and the processes through which consumers develop favorable brand associations.

Important questions, however, remain unanswered regarding the origins of the authenticity that enables these intangible assets to be consolidated over time. Why do some brands succeed in developing culturally legitimate identities, while others, despite investing heavily in advertising, fail to generate comparable levels of emotional commitment?

Addressing this question requires incorporating variables related to the shared identity between an organization and its community—an aspect that constitutes one of the central foundations of the model proposed in this study

2.3 Consumer Communities and Shared Identity.

Over recent decades, the evolution of marketing has progressively shifted scholarly attention from the individual consumer toward the communities that emerge around particular brands. Numerous scholars have argued that contemporary consumption is driven not only by functional needs but also by processes of identity construction, social belonging, and the search for shared meaning.

Within this context, Seth Godin (2008) argues that the most influential organizations do not simply create customers—they create tribes: communities of individuals who share a common worldview, a common set of values, and a common purpose. From this perspective, the success of a brand depends on its ability to become a reference point around which individuals establish social and cultural relationships.

Similarly, the brand community literature has demonstrated that interactions among consumers strengthen loyalty, increase organizational commitment, and promote the organic diffusion of brands (Muniz & O'Guinn, 2001). These studies represent an important advancement by recognizing that organizational value also emerges from the relationships established among consumers themselves.

However, most of these approaches continue to focus primarily on the structure of the community, devoting comparatively less attention to the process through which an organization comes to be perceived as an authentic and legitimate member of that community.

The present study argues that cultural legitimacy is an essential element for understanding the formation of extraordinarily committed communities. Consequently, the focus of analysis should shift from the mere existence of a community to the nature of the relationship that connects the organization with that community.

2.4 Differential Psychology and Authenticity.

Differential psychology argues that individuals exhibit relatively stable differences in their cognitive, emotional, and motivational characteristics, limiting the possibility of explaining human behavior through homogeneous profiles (Forteza & Prieto, 1981).

This perspective has important implications for strategic marketing. Although market segmentation remains an essential tool for understanding complex markets, no market segment consists of completely homogeneous individuals. Even consumers belonging to the same demographic category may possess profoundly different motivations.

Consequently, attempting to develop a value proposition that simultaneously satisfies every individual preference may gradually erode an organization's identity. In highly competitive markets, the constant pursuit of adaptation risks diluting the very attributes that originally distinguished the brand.

From this perspective, authenticity assumes a strategic role. An authentic organization does not seek to satisfy every market expectation indiscriminately; rather, it consistently represents a specific set of values with which particular communities voluntarily choose to identify.

Accordingly, competitive differentiation no longer depends exclusively on adapting to consumer preferences but also on a second mechanism: the consistency between the organization's identity and the cultural identity of the community that chooses to embrace it.

2.5 The Conceptual Gap.

The literature review reveals an important point of convergence among the principal theories of contemporary marketing. Customer orientation explains strategic adaptation to market needs; brand equity theory describes the creation of brand value; community-based approaches examine the formation of collective relationships; and differential psychology recognizes the inherent diversity of human behavior.

Nevertheless, one fundamental question remains unanswered:

How does an organization become a legitimate representative of a community's cultural identity?

Existing theories accurately explain many outcomes of strategic marketing but devote comparatively less attention to the process through which organizational authenticity strengthens the development of extraordinarily committed communities.

In other words, the literature explains effectively how firms identify consumers, develop products, and position brands. However, it provides a less comprehensive explanation of why certain organizations eventually come to be perceived as genuine members of the communities they represent.

This conceptual gap constitutes the point of departure for the Shared Passion Model (SPM).

3. The Shared Passion Model (SPM).

What mechanism explains the emergence of extraordinary commercial success when a strong identification exists between an organization and its community?

The Shared Passion Model (SPM) is a conceptual framework that explains the development of extraordinary competitive advantages through the establishment of an authentic relationship between an organization and the community with which it shares a symbolic identity.

Unlike models that focus exclusively on consumer preferences, the SPM argues that sustainable differentiation emerges when an organization ceases to function merely as a provider of products and services and instead becomes a legitimate participant in the culture it represents.

Accordingly, the model does not interpret the market simply as a collection of consumers but rather as a community composed of individuals who share symbols, values, aspirations, and common ways of interpreting a particular experience.

Within this conceptual framework, Shared Passion is defined as a relational construct that expresses the degree of correspondence between an organization's symbolic identity and a community's cultural identity, thereby fostering authenticity, cultural legitimacy, and the creation of shared symbolic value.

The model proposes that the greater this correspondence, the greater the likelihood of developing highly committed communities, strengthening competitive differentiation, and achieving extraordinary commercial success.

3.1 The Five Dimensions of the Shared Passion Model.

Dimension I: Leadership Authenticity.

An organization's identity originates in the genuine convictions of its leaders. Authenticity cannot be created solely through advertising campaigns; rather, it requires leadership that consistently embodies the values communicated by the brand.

Dimension II: Symbolic Identity.

The organization transforms its values into recognizable symbols, narratives, and experiences. Consequently, the brand no longer represents merely a product but evolves into a philosophy endowed with cultural meaning.

Dimension III: Shared Passion.

Shared Passion emerges when an organization's symbolic identity aligns with the cultural identity of a community. This alignment generates cultural legitimacy, a sense of belonging, and an emotional bond that competitors find difficult to replicate.

Dimension IV: Strategic Coherence.

Authenticity is sustained through consistency between organizational discourse, strategic decisions, and actual behavior. Community trust is reinforced when consumers perceive continuity in the brand's identity over time.

Dimension V: Organic Community Growth.

As a consequence of the preceding dimensions, the community expands voluntarily. New consumers are attracted not merely by promotional campaigns but by the desire to become part of an already established collective identity.

Extraordinary commercial success emerges when an organization achieves a high degree of Shared Passion with its community, creating shared symbolic value through authenticity, symbolic identity, and strategic coherence.

4. Conceptual Architecture of the Shared Passion Model (SPM).

How does an authentic organizational identity evolve into an extraordinary competitive advantage?

The Shared Passion Model (SPM) proposes that extraordinary commercial success is not an isolated outcome but rather the consequence of a relational process composed of successive levels of value creation.

At the first level, the model argues that every organization develops an identity rooted in the convictions of its leadership. When these convictions are authentic and consistently maintained over time, they evolve into a symbolic identity that becomes clearly recognizable within the marketplace.

Subsequently, when this symbolic identity aligns with the values, aspirations, and cultural meanings of a particular community, the phenomenon referred to as Shared Passion emerges. This construct constitutes the explanatory core of the model, representing the mechanism through which an organization ceases to be perceived as an external market actor and instead becomes recognized as a legitimate member of the community.

The presence of Shared Passion promotes strategic coherence, strengthens trust between the organization and its consumers, increases collective identification, and stimulates spontaneous processes of recommendation and community growth.

As a consequence, the organization develops a high level of shared symbolic value, understood as the cultural recognition that the community attributes to the brand beyond its functional attributes. This symbolic value reinforces competitive differentiation, reduces price sensitivity, and ultimately contributes to extraordinary commercial success.

From this perspective, commercial success is not considered a dimension of the model itself but rather the observable outcome of a preceding process of shared symbolic value creation.

Figure 1. Conceptual Architecture of the Shared Passion Model (SPM).

LEVEL I

ORGANIZATIONAL FOUNDATIONS

Leadership Authenticity

↓

Symbolic Identity

LEVEL II

CORE CONSTRUCT

SHARED PASSION

(Brand–Community Relationship)

LEVEL III

ORGANIZATIONAL OUTCOMES

Strategic Coherence

↓

Organic Community Growth

↓

Shared Symbolic Value

↓

Extraordinary Commercial Success

5. Research Propositions.

The conceptual framework developed in this study gives rise to the following research propositions, intended to guide future empirical investigations of the Shared Passion Model (SPM).

P1. A clearly defined symbolic identity increases the likelihood of developing Shared Passion relationships between an organization and its consumer community.

P2. The intensity of Shared Passion strengthens the organization's perceived cultural legitimacy within the community it represents.

P3. Higher levels of strategic coherence promote the organic growth of the consumer community through spontaneous recommendation and collective identification.

P4. Organic community growth enhances the shared symbolic value associated with the brand.

P5. Greater shared symbolic value reduces consumers' price sensitivity while strengthening competitive differentiation.

P6. The combination of competitive differentiation and shared symbolic value increases the likelihood of achieving extraordinary commercial success.

These propositions constitute an initial research agenda that enables the theoretical relationships proposed by the SPM to be operationalized and empirically tested across different industries and cultural settings.

6. Illustrative Evidence.

Why do some organizations develop Shared Passion?

The Shared Passion Model (SPM) is a conceptual proposal and, therefore, does not seek to establish definitive causal relationships through the illustrative cases presented in this study. Rather, the following examples serve an explanatory purpose by demonstrating how diverse

organizational and cultural phenomena are consistent with the relationships proposed by the model.

From this perspective, organizations such as Apple, Ferrari, Rolex, Harley-Davidson, and LEGO have successfully developed highly recognizable symbolic identities that transcend the functional attributes of their products. In these cases, the value perceived by the community depends not only on technological innovation, quality, or performance, but also on the organization's ability to consistently embody a distinctive set of shared values, aspirations, and cultural meanings.

Apple, for example, has established an identity associated with creativity, design, and innovation. Ferrari represents exclusivity, exceptional performance, and motorsport heritage. Harley-Davidson symbolizes freedom, individuality, and membership in a distinctive cultural community. LEGO has cultivated an identity centered on creativity, learning, and intergenerational imagination.

Although these organizations operate in entirely different industries, they all exhibit a common pattern consistent with the Shared Passion Model. Perceived authenticity reinforces symbolic identity; symbolic identity facilitates the emergence of highly committed communities; and these communities subsequently contribute to the development of substantial shared symbolic value.

Accordingly, the model proposes that extraordinary competitive advantage arises less from the functional superiority of products than from an organization's ability to become a legitimate cultural representative of the community with which it shares a symbolic identity.

7. Discussion.

What does the Shared Passion Model (SPM) contribute to marketing theory?

The principal contribution of the Shared Passion Model (SPM) is not to replace traditional marketing theories but rather to extend their explanatory capacity by incorporating a relational mechanism centered on organizational authenticity and shared symbolic identity.

Traditional customer-oriented models have convincingly demonstrated that understanding market needs is an indispensable condition for business success. Likewise, Brand Equity theories have explained how brands create value through awareness, favorable associations, perceived quality, and customer loyalty. Similarly, the literature on brand communities has shown that interactions among consumers strengthen collective commitment and reinforce brand value.

The SPM is fully consistent with these theoretical perspectives in recognizing the importance of such variables. However, it proposes that an earlier process has received comparatively less scholarly attention: the construction of cultural legitimacy by the organization itself.

From this perspective, authenticity should not be understood merely as a reputational attribute but rather as the starting point of a process through which an organization develops a symbolic identity capable of generating Shared Passion relationships with a particular community.

Consequently, the model partially shifts the unit of analysis from the individual consumer toward the dynamic relationship between the organization and the community. It proposes that extraordinary commercial success depends not only on understanding market needs but also on an organization's ability to consistently embody the values shared by the community it seeks to represent.

Rather than contradicting the existing literature, the Shared Passion Model integrates it into a broader conceptual framework in which authenticity, symbolic identity, community, and shared symbolic value function as complementary mechanisms of value creation.

Conceptual Positioning of the Shared Passion Model.

Conceptual Framework	Primary Unit of Analysis	Central Question	Primary Contribution	How the SPM Extends the Framework
Kotler & Keller	Consumer	How can customer needs be satisfied?	Customer orientation	Explains how organizations become cultural reference points rather than merely product providers.
Aaker	Brand	How is brand value created?	Brand Equity	Explains the relational and symbolic origins of brand value.
Keller	Consumer and brand associations	How is perceived value formed?	Customer-Based Brand Equity	Introduces organizational authenticity as an antecedent of brand associations.
Godin	Community	How are tribes formed?	Leadership and belonging	Explains how organizations acquire legitimacy within the communities they represent.
Shared Passion Model (SPM)	Organization–Community Relationship	How does extraordinary commercial success emerge?	Integrates authenticity, symbolic identity, Shared Passion, and shared symbolic value into a unified conceptual framework.	—

7.1 Scope of the Model.

The Shared Passion Model (SPM) is not intended to explain every phenomenon associated with organizational commercial performance. Factors such as financial resources, operational efficiency, technological innovation, economic conditions, regulatory environments, and organizational capabilities continue to play a decisive role in determining business competitiveness.

The scope of the model is specifically focused on explaining how certain organizations develop extraordinary competitive advantages through processes of authenticity, symbolic identity construction, and the development of highly committed communities.

Accordingly, the SPM is particularly relevant to industries in which symbolic value constitutes a significant component of the value proposition, including luxury goods, technology, fashion, sports, entertainment, gastronomy, education, hospitality, and cultural organizations. Its applicability to purely transactional markets should be examined through future empirical research.

8. Implications.

8.1 Theoretical Implications.

From an academic perspective, the Shared Passion Model (SPM) extends the traditional marketing paradigm by introducing organizational authenticity and shared symbolic identity as antecedents of competitive differentiation.

Furthermore, the model introduces Shared Passion as a relational construct that can be operationalized and empirically validated, thereby opening new opportunities for the development of measurement instruments and comparative studies across industries and cultural contexts.

Accordingly, the SPM should be understood as an initial conceptual framework intended to stimulate future research rather than as a fully validated theory.

8.2 Managerial Implications.

From a managerial perspective, the model suggests that sustainable competitive advantage depends not only on understanding consumers but also on preserving organizational authenticity and cultivating an identity that is consistent with the values of the community the organization seeks to represent.

Within this perspective, competitive differentiation is no longer based solely on functional product attributes or communication campaigns. Instead, it incorporates strategic coherence and the creation of shared symbolic value as long-term strategic assets.

Consequently, managers should evaluate not only customer satisfaction but also the degree of cultural identification their organizations generate within the communities they serve.

9. Limitations.

The present study is conceptual in nature and, therefore, does not provide empirical evidence intended to confirm the relationships proposed by the Shared Passion Model (SPM). The propositions developed herein constitute an initial research agenda and should be examined through quantitative, qualitative, and longitudinal methodologies across different industries and cultural contexts.

Likewise, the model is not intended to replace the classical approaches to strategic marketing but rather to complement them through a relational mechanism that emphasizes authenticity, symbolic identity, and community building.

11. Conclusions.

Customer orientation has profoundly transformed both marketing theory and practice, becoming one of the fundamental pillars of contemporary management. Nevertheless, the growing importance of brand communities and symbolic value suggests that a comprehensive understanding of extraordinary commercial success requires the incorporation of additional mechanisms beyond those traditionally emphasized in the marketing literature.

In response to this challenge, this study introduces the Shared Passion Model (SPM) as a conceptual framework designed to explain how organizational authenticity, symbolic identity, and the development of Shared Passion foster the emergence of highly committed communities and competitive advantages that are difficult to imitate.

Rather than challenging the foundations of the customer-oriented paradigm, the model complements it by adopting a relational perspective that places cultural legitimacy and shared symbolic value at the center of the strategic differentiation process.

Accordingly, the Shared Passion Model represents an invitation to broaden the study of marketing beyond a logic centered exclusively on need satisfaction toward a deeper understanding of the symbolic relationships that connect organizations with the communities they represent.

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Preventive Beauty Diplomacy: How Wellness and Longevity Are Becoming the New Global Soft Power

Dr. Amb.Diplomat. Shaymaa Abdel Nabi

In 2026, nations are no longer competing only through military power or economic strength. They are also competing through healthcare innovation, wellness ecosystems, longevity science, and quality of life.

Nations are increasingly recognizing that the wellbeing of their populations is not only a healthcare priority, but also a strategic asset that shapes economic resilience, cultural influence, and international reputation.

As the world faces rising healthcare costs, aging populations, chronic diseases, environmental stressors, and growing mental health challenges, a global transformation is taking place. The future of leadership will belong to nations and institutions that invest in prevention rather than reaction, wellness rather than illness, and sustainability rather than short-term solutions.

This transformation has given rise to what may be called “Preventive Beauty Diplomacy” — the integration of preventive healthcare, wellness innovation, healthy aging, and beauty sciences into the broader framework of global soft power and international collaboration.

From Reactive Healthcare to Preventive Wellness

For decades, healthcare systems around the world operated primarily under a reactive model: waiting for disease to appear before beginning treatment. However, advances in medical science, biotechnology, diagnostics, nutrition, and wellness research are shifting global priorities toward prevention, prediction, and personalization.

Today, modern healthcare increasingly focuses on identifying risks early, improving quality of life, and promoting long-term wellbeing before serious illness develops. This evolution reflects a larger understanding that health is not simply the absence of disease, but a state of physical, mental, and social wellbeing.

This same philosophy is reshaping the beauty and wellness industries. Beauty is no longer viewed only as an external aesthetic concept. Increasingly, it is connected to internal health,

nutrition, stress management, hormonal balance, sleep quality, healthy aging, and preventive lifestyle practices.

The future of beauty is becoming scientific, personalized, and preventive.

The new global healthcare philosophy can be summarized in a simple principle:
“We no longer wait for disease; we predict, prevent, and personalize.”

This preventive approach is influencing not only medicine, but also skincare innovation, nutritional science, pharmaceutical cosmetology, longevity research, and wellness technologies worldwide.

Wellness as the New Global Soft Power

Historically, soft power was associated with culture, education, diplomacy, and media influence. Today, wellness and healthcare innovation are becoming equally powerful tools of international influence.

Countries that successfully build strong wellness ecosystems are increasingly attracting international attention, investment, tourism, and strategic partnerships. Nations are now competing not only in economic performance, but also in their ability to improve human wellbeing and promote healthy lifestyles.

India, for example, has strengthened its international influence through Ayurveda, wellness tourism, yoga diplomacy, and integrative healthcare traditions. Japan continues to inspire the world through its longevity culture, preventive lifestyle habits, advanced healthcare technologies, and emphasis on healthy aging. The United Arab Emirates has emerged as a regional hub for medical tourism, wellness innovation, and healthcare investment. South Korea has transformed beauty technology and skincare innovation into a global cultural and economic force.

This shift demonstrates that wellness is no longer merely a lifestyle sector; it has become an important pillar of economic diplomacy, cultural diplomacy, and international cooperation.

Preventive beauty, longevity sciences, biotechnology, sustainable healthcare systems, and wellness innovation are becoming part of how nations project influence and build international partnerships in the twenty-first century.

The Rise of the Longevity Economy

One of the most significant global transformations of our time is the rise of the longevity economy.

People are living longer than previous generations, but longevity alone is no longer enough. The global conversation is shifting toward “healthy longevity” — extending not only lifespan, but healthspan, vitality, productivity, and quality of life.

This has created growing demand for preventive diagnostics, personalized nutrition, regenerative medicine, healthy aging technologies, wellness services, mental wellbeing programs, and evidence-based beauty innovations.

The longevity economy is expected to shape the future of healthcare, biotechnology, wellness industries, pharmaceutical research, and global investment trends for decades to come.

However, longevity should not mean spending more years managing illness or dependency. Instead, it should represent a future where individuals maintain energy, dignity, independence, and wellbeing throughout their lives.

Longevity should not mean spending many years managing illness. It should mean spending many years enjoying life.

In this context, sustainability and longevity become deeply interconnected. Sustainable healthcare systems must focus on prevention, education, healthy lifestyles, and long-term wellbeing rather than relying exclusively on expensive late-stage treatments.

True sustainability is not only about extending years of life; it is about adding life to those years.

Women Leading the Wellness Transformation

Women are playing a major role in shaping the future of global wellness, preventive healthcare, and beauty innovation.

Across the world, female entrepreneurs, healthcare professionals, researchers, and business leaders are driving innovation in wellness technologies, skincare science, nutritional health, biotechnology, and preventive healthcare solutions.

The beauty and wellness sectors have become important engines of economic empowerment, particularly for women-led enterprises. Beyond economic contribution, women leaders are also redefining the industry itself — shifting the focus away from unrealistic standards and toward holistic wellbeing, self-care, healthy aging, confidence, and scientific wellness.

This transformation creates opportunities for stronger international partnerships, cross-border investments, and collaborative innovation between countries seeking sustainable economic growth and healthier societies.

Women-led innovation in preventive wellness is not only a business opportunity; it is becoming a global force for social and economic transformation.

A Future Built on Prevention, Wellness, and Human Wellbeing

The future of diplomacy may increasingly depend on how nations improve the lives of their people. Countries that invest in wellness, preventive healthcare, healthy longevity, sustainability, and innovation will likely gain stronger influence in the global landscape of the future.

Preventive beauty is no longer simply a luxury industry or cosmetic trend. It is becoming part of a larger international movement centered on human wellbeing, scientific innovation, sustainability, and quality of life.

In the coming decades, healthcare, beauty, longevity, and wellness will become more interconnected than ever before. Governments, businesses, healthcare institutions, and innovators will need to collaborate across borders to create systems that prioritize prevention, resilience, and healthier living.

The nations that lead this transformation may become the next generation of global influencers — not only because of their economic or political power, but because of their ability to improve human life itself.

Ultimately, the future of global leadership may not belong only to those who build the strongest economies or military alliances, but to those who help humanity live healthier, longer, and better lives.

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The Silent Revolution of Personal Development

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Abstract

Personal development is a continuous process of inner transformation that enables individuals to reach their full potential. Beyond acquiring knowledge or technical skills, it involves strengthening character, cultivating discipline, developing positive habits, and taking responsibility for one's own growth. This article argues that success does not result from radical changes but from small, consistent improvements inspired by the Japanese philosophy of *Kaizen*, which, when sustained over time, produce extraordinary outcomes. Furthermore, it highlights the importance of perseverance, emotional intelligence, a clear sense of purpose, and the ability to interpret life's events from a constructive perspective. In a world shaped by rapid technological advances and constant change, investing in oneself remains the most effective strategy for achieving sustainable personal development, creating meaningful impact, and building a purposeful life.

Keywords: Personal Development; Kaizen; Habits; Continuous Improvement; Emotional Intelligence

Introduction

In a world characterized by uncertainty, rapid technological advancement, and the relentless pursuit of immediate results, personal development has become a necessity rather than a choice. Genuine growth, however, does not depend on external circumstances or instant transformations; instead, it emerges from a continuous process of inner improvement. This article examines the importance of strengthening character, cultivating positive habits, and embracing continuous improvement as a way of life. It argues that small, consistent actions sustained over time constitute the foundation for achieving lasting personal and professional success.

Main Body

We live in an era defined by constant change, rapid technological advancement, and increasingly intense competition. At the same time, many people continue to wait for something external to make life easier or solve their problems, whether it is a new service, a technological breakthrough, or even a robot.

The challenge is that while the external world evolves at an unprecedented pace, many individuals remain convinced that the solution to their lives lies outside themselves. For years, we have searched for answers in external circumstances. We believe that the next job, another professional certification, a higher salary, or even relocating to a different city will resolve the dissatisfaction we feel within. Yet sooner or later, we are confronted with an uncomfortable truth: we may change our environment as many times as we wish, but as long as our way of thinking remains unchanged, we will continue to produce the same outcomes under different circumstances.

Bryan Tracy famously argued that if we want something to change in the external world, we must first change what is within ourselves. When we change, everything around us begins to change, not the other way around.

Personal development is far more than acquiring new skills, reading self-improvement books, or attending motivational seminars. Above all, it is a deliberate and continuous process of personal evolution that enables individuals to transform themselves from within. Genuine transformation begins with **who we are** before influencing **what we do**, ultimately shaping **the results we achieve**.

This inner transformation allows individuals to discover their true potential, strengthen their character, become more resilient in the face of adversity, and build a life aligned with a clear and meaningful purpose.

Among all the resources available to human beings, the mind is undoubtedly the most valuable, yet it is often the most neglected. We tend to believe that acquiring knowledge, earning academic

qualifications, reading more books, or developing technical skills are the most important investments we can make. While these are unquestionably valuable, they raise a fundamental question: **What about character?**

Knowledge opens doors, but character determines whether we are capable of walking through them. The world is filled with exceptionally intelligent individuals who never developed the discipline required to transform their talent into meaningful results. Conversely, many seemingly ordinary people have built extraordinary lives through perseverance and consistency. In the long run, character often carries individuals much further than talent alone.

Those who achieve remarkable success are not necessarily the most qualified or naturally gifted. More often, they are the people who remain committed to the process rather than becoming obsessed with immediate results.

Kobe Bryant frequently emphasized that the goal is not to become better than others, but to become better than the person you were yesterday. As he expressed in *The Mamba Mentality*, **"Greatness is a process, not a destination."** This perspective reinforces an essential principle: continuous improvement is ultimately more valuable than talent itself.

One of the philosophies that best embodies this principle is the Japanese concept of **Kaizen**, widely recognized in both personal development and organizational management.

Kaizen refers to continuous improvement achieved through small, consistent changes sustained over time. The term derives from two Japanese characters:

- **Kai (改):** change
- **Zen (善):** for the better

Together, *Kaizen* literally **means "change for the better."**

Although the philosophy is now widely applied in business, education, healthcare, and personal development, it gained worldwide recognition through its implementation at Toyota after the Second World War, where it became one of the foundational principles of the **Toyota Production System (TPS).**

The philosophy of Kaizen maintains that there is never a point at which improvement is no longer possible. Every activity, no matter how efficient it may appear, can always be refined.

Rather than advocating radical transformation, Kaizen promotes small but consistent improvements.

Examples include:

- Reading ten pages every day.
- Saving five percent of one's monthly income.
- Improving one specific aspect of an academic presentation.
- Reducing the duration of an administrative process by one minute.

Over time, these seemingly insignificant improvements accumulate, producing substantial and lasting results.

The difficulty is that human beings tend to underestimate small improvements because they rarely produce immediate recognition or visible rewards. Reading a single page appears insignificant...

Another workout session may seem insignificant. Saving a small percentage of one's income may appear to make little difference. Yet life is rarely transformed by spectacular decisions. More often, it is shaped by hundreds of seemingly insignificant choices that, over time, culminate in an entirely different future.

As Bryan Tracy (2010) aptly observed, **"If what you are doing is not moving you toward your goals, then it is moving you away from them."**

What matters most is not speed, but direction.

Modern society has become obsessed with achieving results quickly. We expect outcomes within weeks for endeavors that, by their very nature, require years of sustained effort. In reality, the strongest trees take decades to mature. During the early stages of growth, a seed appears lifeless because nothing visible is happening above the surface. Yet beneath the ground, an extensive root system is developing, one that will eventually support a tree capable of withstanding

powerful storms. Human development follows the same principle. Before success becomes visible, the invisible foundations must first be established.

Nevertheless, many people have become accustomed to expecting immediate results. When progress is not quickly apparent, they often abandon their goals long before meaningful outcomes have had the opportunity to emerge.

This tendency reflects a broader cultural pattern. We live in a society accustomed to instant gratification: instant messaging, online shopping, immediate access to information, and on-demand entertainment. Consequently, this expectation extends to objectives that inherently require patience, such as acquiring new skills, launching a business, improving physical fitness, or building a successful professional career.

This is precisely where many individuals fall into a trap. They give up long before their efforts have had sufficient time to produce visible results.

By contrast, individuals who have developed mental resilience learn to detach themselves from immediate outcomes. They trust that the effort invested today represents a seed whose harvest will come in due time.

This principle is also reflected in the biblical concept of **sowing and reaping**. One cannot harvest what has never been planted, nor can the harvest be forced before its proper season. Everything unfolds according to its own timing, and understanding this principle is an expression of wisdom. Yet it is a principle that many people continue to overlook.

Nature is never in a hurry, yet everything blossoms at the appropriate time. No farmer expects to harvest a crop on the same day the seed is planted. Farmers understand that growth follows a process that cannot be accelerated. Ironically, when it comes to our own aspirations, we often abandon this logic, expecting to achieve within months what actually requires years of quiet preparation, persistence, and continuous improvement.

James Clear (2018) argues that **"habits are the compound interest of self-improvement."** Just as money grows through compound interest, the effects of our habits multiply as they are repeated over time.

Ironically, many people give up precisely when this "compound interest" is about to begin working in their favor. Because progress is initially invisible, they mistakenly conclude that their efforts are producing no meaningful results. What they fail to recognize is that progress is often silent before it becomes visible. For a long time, it may seem that nothing is changing, until one day, everything appears to have changed all at once.

The key is not to pursue dramatic transformations but to begin with small, consistent changes in everyday life. Gradually improving one's habits is what ultimately produces remarkable long-term results.

When people attempt to transform their lives overnight, those changes are rarely sustainable. This is where most individuals fail. Genuine transformation occurs through small improvements maintained consistently over extended periods of time.

The greatest obstacle to personal growth is seldom a lack of ability, but rather inconsistency. Most people already know, at least in theory, what they should do to improve their lives: eat healthier, manage their time more effectively, read more frequently, cultivate meaningful relationships, or develop new competencies. The problem rarely lies in a lack of knowledge; instead, it lies in sustaining those behaviors once the initial motivation fades. Discipline, by contrast, enables individuals to act even when enthusiasm disappears. As Aristotle famously observed, **"We are what we repeatedly do. Excellence, then, is not an act but a habit."** Accordingly, success belongs not necessarily to those with extraordinary motivation, but to those who transform productive behaviors into an integral part of their daily lives until those behaviors become part of their identity.

Both the body and the mind naturally adapt to gradual change. However, when change is introduced abruptly, they tend to resist it.

This principle is often illustrated through the well-known **boiling frog metaphor**. If a frog is placed directly into boiling water, it immediately recognizes the danger and jumps out to save itself. However, if the same frog is placed in cool water that is heated slowly and gradually, it fails to perceive the danger. Instead, it adapts to the rising temperature until the water reaches a boiling point, at which stage it is no longer able to escape.

The lesson behind this metaphor is profound. Just as small positive changes gradually strengthen and improve our lives, small negative changes can slowly erode them without our even noticing.

It is important to understand that success is not an overnight process—and neither is failure.

Perhaps the most unsettling aspect of this metaphor is that we rarely recognize our own gradual decline. No one becomes sedentary in a single day. No meaningful relationship is destroyed by one isolated argument. No one experiences financial ruin because of a single poor decision. Major crises are typically the silent consequence of hundreds of seemingly insignificant decisions that appeared harmless when they were made.

Likewise, personal development is not a single event but a cumulative process that is either built, or undermined, quietly over time. Just as health gradually improves or deteriorates, and relationships are strengthened or weakened through daily interactions, human development follows the same invisible principle.

Sometimes that process is so subtle that by the time we recognize it, it is already too late.

What Is Success?

The definition of success varies from one person to another. From the perspective presented in this article, success is the achievement of a meaningful personal goal. Whether that goal is ambitious or modest is of secondary importance; what truly matters is that it reflects something deeply significant to the individual.

For one person, success may mean traveling the world. For another, it may involve building a large and loving family. For someone else, it may consist of creating a successful business empire.

Success is therefore not defined by society's standards, but by the fulfillment of one's own aspirations.

Mark Manson offers an insightful illustration of this perspective. Early in his career, he regarded success as simply being able to maintain his personal blog and devote himself to work he genuinely enjoyed, even when it generated little or no income. For him, the true measure of success was the excitement of waking up on a Monday morning eager to begin the workweek. In essence, success meant making a living doing what he was passionate about.

Ultimately, this broader understanding of success also involves developing a positive mindset, a concept that closely aligns with Stoic philosophy.

Achieving lasting success is difficult when one's outlook is dominated by negativity or a scarcity mindset. According to the Stoics, events themselves are neither inherently good nor bad. External circumstances are fundamentally neutral; it is the human mind that assigns meaning, interpretation, and value to them.

As a result, optimistic individuals tend to focus on the opportunities within an event, whereas pessimistic individuals concentrate on its disadvantages—even though the event itself remains exactly the same.

Consider someone who says, **"This is what happened,"** followed by, **"It is a bad thing."** The first statement is objective because it merely describes the facts. The second is subjective because it reflects an interpretation rather than the event itself.

For this reason, one of the most valuable skills in personal development is learning to distinguish facts from interpretations. Separating what actually occurred from the meaning we assign to it enables us to respond more rationally and constructively.

Consequently, an event perceived as catastrophic by one person, such as losing a job, may become a profoundly liberating experience for another. This illustrates that lasting success depends less on external circumstances than on our ability to shape and master our own perspective.

A well-known saying captures this principle: **"If you do not like something and have the power to change it, change it. If you cannot change it, change your perspective. Perspective changes everything."**

Sometimes, transforming our lives requires nothing more than changing the way we interpret the experiences we go through, even when the circumstances themselves remain unchanged.

For this reason, genuine personal development begins with learning to master oneself before attempting to lead others. Throughout history, great leaders have understood that effective leadership starts with self-leadership. Self-discipline, emotional intelligence, integrity, and a commitment to lifelong learning are competencies far more valuable than technical knowledge acquired in isolation.

One of the greatest obstacles to human development is the belief that talent determines destiny. Although natural abilities may provide an initial advantage, it is perseverance, consistency, and deliberate practice that ultimately explain sustained achievement. Excellence is rarely the product of chance; rather, it is the outcome of thousands of sound decisions made when no one is watching.

Personal development also requires taking full responsibility for one's own life. It is easy to attribute difficulties to economic conditions, political circumstances, one's educational background, or a lack of opportunities. However, individuals who successfully transform their lives share one defining characteristic: they focus their energy on what they can control. They replace excuses with constructive habits, seek solutions instead of assigning blame, and transform obstacles into opportunities for learning and growth.

Education plays a fundamental role in this process. Nevertheless, it is essential to distinguish between accumulating information and developing wisdom. We live in an era of unlimited access to knowledge, yet also in one characterized by superficiality and constant distraction. Reading more books does not necessarily lead to greater understanding, nor does attending more courses automatically make someone a better professional. Genuine learning occurs only when knowledge transforms the way we think, make decisions, and act.

Another essential component of personal development is purpose. Individuals who find profound meaning in what they do tend to demonstrate greater resilience, creativity, and commitment. Purpose serves as a compass, guiding decisions even during periods of uncertainty. When success is no longer defined solely by financial achievement but also by the opportunity to create a positive impact, work acquires a deeper and more meaningful dimension.

No discussion of personal development would be complete without acknowledging the importance of emotional intelligence. Understanding one's emotions, regulating impulsive responses, and cultivating healthy relationships are indispensable competencies in a world where uniquely human capabilities are becoming increasingly valuable in the face of automation. As artificial intelligence continues to perform technical tasks with growing efficiency, it will be these distinctly human qualities that distinguish the professionals of the future.

Likewise, personal development requires cultivating the habit of reflection. In a society obsessed with speed, taking time to evaluate one's direction may seem like a luxury. Yet individuals who regularly reflect on their decisions, learn from their mistakes, and reassess their goals tend to move forward with greater clarity and consistency. Reflection transforms experience into learning; without it, the years simply accumulate.

Personal development also possesses an ethical dimension that is frequently overlooked. Growth is not merely about becoming more competent but also about becoming a better human being. Honesty, empathy, humility, and a spirit of service cultivate trust—the foundation of every healthy relationship, organization, and society. Success achieved without values may come quickly, but it seldom endures.

The world's most innovative organizations have recognized that their greatest competitive advantage lies not solely in technology or financial capital, but in their ability to continuously develop their people. Likewise, the most prosperous nations invest deliberately in the comprehensive development of their citizens. Human development remains the true engine of economic and social progress.

Every individual faces a silent decision each day: to remain within the comfort of the familiar or to embrace the challenge of becoming a better version of oneself. This seemingly small choice ultimately shapes the course of an entire lifetime.

Personal growth does not occur spontaneously. It demands discipline, the humility to keep learning, and the courage to embrace change. Perhaps the most important question is not how much we have achieved so far, but how much of our potential still remains unrealized. The greatest tragedy is not failing to achieve our dreams, but settling for a diminished version of who we are capable of becoming.

In a world where everything changes with extraordinary speed, one investment never loses its value: investing in oneself. Skills can be updated, circumstances can change, and opportunities may appear or disappear. Yet a person who has developed character, knowledge, purpose, and resilience possesses a form of capital that no crisis can ever take away.

Ultimately, personal development is not a destination but a lifelong journey of continuous improvement. It is a daily commitment that transforms individuals, strengthens organizations, and contributes to the progress of society. After all, the world truly changes only when people choose to change.

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Significant Harm" Dilemmas and the Criminal Policy of Illegal Hunting in Georgia: Legislative Challenges and Judicial Practice (on the Example of Article 301 of the Criminal Code)

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Abstract: Among the modern global and local challenges, environmental security and sustainable management of natural resources are gaining particular relevance. In this process, the protection of the animal world, which is a critical component of ecological balance, occupies a central place. Despite constitutional guarantees and state policy, illegal hunting (poaching) still remains one of the acute environmental crimes of Georgian reality.

The purpose of this article is to provide an in-depth, dogmatic and practical analysis of Article 301 of the Criminal Code of Georgia (CCG) ("Illegal Hunting"), to identify the general and special (aggravating) components of the act, as well as to critically assess the theoretical and methodological dilemmas existing in judicial practice.

The research process uses the methods of dogmatic legal analysis, comparative law and systematic study of judicial practice. Special attention is paid to the material consequence envisaged by Part 1 of Article 301 of the Criminal Code – the concept of "significant damage". The paper analyzes the main legislative gap, which is manifested in the fact that the criminal legislation does not contain an exact monetary limit or clear quantitative criteria for determining significant damage. Due to the aforementioned legislative vacuum, practice is forced to rely on the tariffs and expert opinions established by the Ministry of Environmental Protection and Agriculture of Georgia. This ambiguity of the law violates the principle of legal certainty. When interpreting such norms, the Constitutional Court of Georgia often indicates that the law should be sufficiently clear and easily understandable for any person.

The article discusses in detail the aggravating circumstances provided for in Part 2 of Article 301 of the Criminal Code of Georgia, namely: hunting in state reserves and protected areas, use of mechanical means of transport and mass destruction, hunting of game birds included in the "Red List" of Georgia and in a helpless state, as well as committing an act in zones of emergency ecological situation or ecological disaster. Attention is paid to difficult cases of qualification – a combination of crimes (for example, the coincidence of illegal hunting and illegal circulation of firearms), an unfinished crime (attempt) and forms of complicity in the context of organized poaching. The research revealed that the existing criminal justice mechanisms need to be improved. Accordingly, the paper formulates policy recommendations for the academic community and legislators: It is advisable to more precisely define the criteria for "significant damage" at the normative level or through subordinate legislation in order to exclude subjective approaches and increase the preventive effectiveness of the fight against environmental crime.

Keywords: Illegal hunting, poaching, significant damage, environmental crime, wildlife, criminal justice policy, judicial practice

Introduction

In the twenty-first century, ensuring environmental security and sustainable management of natural resources has become one of the most pressing challenges on a global scale (Bogojević, 2021). Preserving biodiversity and protecting ecosystems is no longer just a local initiative, it is a planetary-scale value that directly affects the living environment of humanity, climate stability and the ecological well-being of future generations (Birnie et al., 2009).

In this global context, the animal world is an integral and critical component of ecological balance. Each representative of the fauna performs a unique function in natural chains, and the degradation or destruction of their populations leads to irreversible changes in ecosystems (Gorenflo et al., 2006). The Constitution of Georgia, recognizing the fundamental importance of environmental protection and rational use of natural resources, imposes a clear obligation on the state to ensure the ecological security of the country and take care of the preservation of natural heritage (Constitution of Georgia, 1995, Article 37). Despite the existence of constitutional guarantees and environmental legislation, the illegal appropriation of natural resources and, in particular, the systemic nature of illegal hunting (poaching) remain an acute problem in practice. Illegal hunting in the reality of Georgia is not only an administrative offense, but also an ecological crime of high public danger, which systematically harms the country's gene pool (Gvenetadze, 2020). The increase in the scale of poaching is often due to socio-economic factors, illegal commercial interests and sports gambling, although the problem is further aggravated by theoretical and practical shortcomings in the legislation.

Article 301 of the Criminal Code of Georgia (Illegal Hunting) establishes criminal liability for violation of hunting rules. However, when applying the norm, researchers and practicing lawyers constantly face a fundamental dilemma: the first part of the article requires the occurrence of a material result – "significant damage", while the legislation does not provide clear quantitative criteria and monetary limits for this concept (Tkeshelashvili, 2022). As a result, the assessment of damage almost entirely relies on departmental tariffs and individual expert conclusions. This leads to heterogeneity of judicial practice, increases the risk of subjective approaches and weakens the preventive effectiveness of criminal policy (Ksovreli, 2023).

The aim of this paper is to provide a complex, dogmatic and practical analysis of Article 301 of the Criminal Code of Georgia. The article aims to:

1. Clearly outline the normative content of Part 1 (general elements) and Part 2 (special/aggravating elements) of Article 301 of the Criminal Code of Georgia,
2. Critically analyze the ambiguity of the material element of "significant damage" and its impact on criminal qualification,
3. Examine the challenges in judicial practice and the complex cases of joint crimes, attempt and complicity,
4. Develop practical recommendations to improve the legislative framework and ensure uniformity of practice.

To successfully fulfill the research objectives, the methodological toolkit recognized by modern legal scholars has been used:

- Dogmatic legal analysis: used for the textual, exegetical and systemic interpretation of Article 301 of the Criminal Code of Georgia in order to determine the real content of the norm, the elements of its objective and subjective sides.
- Comparative legal method: used to reconcile Georgian legislative practice and international (especially European) standards of ecological criminal law.
- Systematic study of judicial practice: based on the analysis of decisions taken by the general courts of Georgia, which makes it possible to identify real practical problems in the confirmation and qualification of "significant damage".
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Main part

General composition of actions (Part 1 of Article 301 of the Criminal Code of Georgia): Part 1 of Article 301 of the Criminal Code of Georgia (CCC) establishes the main, general composition of illegal hunting, which from the point of view of legal dogma is a crime of complex, material composition. The correct interpretation and application of this norm is critically important both for theoretical jurisprudence and for the formation of uniform judicial practice. Based on the disposition of the law, the general composition of the action includes both objective and subjective signs, each element of which requires a special analysis.

1. **Objective side** - the objective side of Part 1 of Article 301 of the Criminal Code includes the object, subject, alternative conduct and mandatory material consequence of the crime.

Generic and specific object of the crime (environmental order)

In the theory of criminal law protection, the generic object of ecological crimes is environmental safety and the order of use of natural resources (Gvenetadze, 2020). At the level of the specific object, the legislator protects public relations that ensure the protection, reproduction and sustainable management of the animal world. As international law researcher Peter Birnie notes, the protection of fauna and ecosystems is no longer only the prerogative of national legislation, it is an international obligation of sovereign states, since the destruction of biodiversity leads to transboundary crises (Birnie et al., 2009).

Subject of crime (objects of the animal world)

The material subject of the crime is the objects of the animal world in a free state (in the natural environment) – game and birds. The dogmatics of Georgian criminal law accept that the subject is not livestock or animals in captivity (the action against which is qualified as another type of crime – for example, a crime against property or cruel treatment of animals) (Tkeshelashvili, 2022). The subject must be in a natural habitat, where the legal regime of hunting applies.

Alternative forms of action (violation of permit, time, place and weapon/means)

The provision of the law establishes alternative forms of committing a crime. Illegal hunting occurs when a person acts:

- Without a proper permit (license) – when the administrative procedures established by the legislation are violated;
- In a prohibited place – in zones where hunting is not allowed due to territorial status;
- During a prohibited time – during seasonal restrictions, prohibited periods (for example, the breeding season);
- With a prohibited weapon or means – using illegal technical equipment.

As European researcher Sanja Bogojević points out, the technical nature of violating environmental regulations requires strict synchronization of criminal and administrative legislation, otherwise the risk of practical inconsistencies increases (Bogojević, 2021).

Material consequence – "significant damage" and methodological problems of its determination in practice

Part 1 of Article 301 of the Criminal Code is a crime of material content. In order for an action to be qualified as a criminal offense and to be distinguished from an administrative offense, it is necessary to achieve the result stipulated by law – "significant damage".

However, one of the main systemic challenges of the Georgian legislative space is the fact that the Criminal Code does not establish an exact quantitative threshold or monetary equivalent for "significant damage". In practice, this dilemma is resolved on the basis of tariffs and expert opinions established by the Ministry of Environmental Protection and Agriculture (Ksovreli, 2023). As the local legal literature indicates, an assessment based on tariffs often provokes criticism, as it does not automatically reflect the actual damage caused to the ecosystem and increases the risk of inconsistency in judicial practice (Turava, 2021).

2. **Subjective side** - The subjective side of the crime assesses the mental attitude of the person towards the committed act and its consequences.

Form of guilt (intent) and its standards

The crime provided for in Article 301 of the Criminal Code is committed only with intent (direct or indirect intent). The standard of proof of guilt requires that it be demonstrated that the offender was aware of the illegal nature of his action (for example, he knew that he was hunting during a prohibited time or without a permit), was aware of the possibility of a material consequence – significant damage – occurring, and wanted or allowed this result (Macsaberidze, 2019). Negligent illegal hunting does not give rise to criminal liability under this article under the legislation of Georgia, which once again emphasizes the importance of the standard of proof of the subjective side in criminal proceedings.

Motive and purpose (material benefit and sporting excitement) and their impact on the individualization of punishment

Despite the fact that motive and purpose are not mandatory features of the main content of Article 301 of the Criminal Code, they have a decisive practical significance for the phenomenological analysis of poaching and the individualization of punishment. In practice, two main motivational groups are distinguished:

1. Obtaining material benefit (commercial poaching): aimed at the sale of illegally obtained products (meat, skins, valuable parts).
2. Sporting excitement and recreational interest: when the hunting process is driven by emotional or selfish aspirations, bypassing the rules.

In judicial practice, consideration of motive and purpose influences the determination of the size of the sentence (for example, in cases of organized poaching for commercial purposes, the court takes a stricter approach) (Chelidze, 2022).

Qualified (aggravating) elements of the act (Part 2 of Article 301 of the Criminal Code of Georgia): Part 2 of Article 301 of the Criminal Code of Georgia establishes qualified, or aggravating, elements of illegal hunting. If the first part of the article serves to regulate general cases, Part 2 identifies those special circumstances, the existence of which sharply increases the public danger of the act. The legislator uses such an approach due to the fact that some zones, methods or representatives of the fauna require special, enhanced legal protection from the state (Gvenetadze, 2020). The analysis of this section requires a detailed legal assessment of each alternative aggravating circumstance.

1. **State nature reserves and protected areas: special regime zones and strict regime of their legal protection**

The first alternative composition of Part 2 of Article 301 of the Criminal Code of Georgia relates to hunting "in a state nature reserve or other protected area, where hunting is completely prohibited". In accordance with the Law of Georgia "On the System of Protected Areas", various categories of protected areas operate in the country (state nature reserve, national park, restricted area, etc.), each of which has a strictly defined functional zoning and legal regime (Tkeshelashvili, 2022).

- State nature reserve: is a zone of the strictest protection, where any human economic or other activity, including hunting, is completely and unconditionally prohibited. The main purpose of nature reserves is to preserve natural ecosystems in their original form and protect the gene pool.
- Other protected areas: National parks or reserves, where, depending on the zoning (for example, in traditional use zones or strict protection zones), hunting rules are regulated by law and in certain zones go beyond the limits of what is permitted.

As international environmental law researcher Peter Birnie notes, the encroachment on the network of protected areas is a crisis of transboundary significance, since protected areas represent "survival buffer islands" of biodiversity in the face of global climate change (Birnie et al., 2009). Criminal policy in this case is based on the presumption that hunting in a reserve itself entails increased damage to the ecosystem, even if the number of animals taken in a particular episode is small.

2. **Mechanical means of transport and mass destruction: Dangers of using technical means (cars, helicopters, electric shock, explosives) for fauna**

According to Article 301, Part 2 of the Criminal Code, hunting "by means of mechanical transport or mass destruction" is considered an aggravating circumstance. This provision responds to the negative impact of technical progress on the natural environment, as modern technologies completely violate the principle of "equal chance" (fair chase) between the hunter and the animal.

- **Mechanical means of transport:** cars, motorcycles, quadricycles, motorboats or helicopters. Their use during hunting (for example, chasing an animal, running it over with a car and then destroying it) increases the public danger of the act, since the animal is deprived of even the minimum chance of defense and escape (Ksovreli, 2023).
- **Means of mass destruction:** explosives, chemical poisons, electroshock devices, mass systems of hunting traps, etc. As Sanja Bogojević points out, the use of means of mass destruction leads to a violation of the principle of selective damage to the ecosystem – not only the target species dies, but also the surrounding fauna, which leads to an irreparable demographic decline in local populations (Bogojević, 2021).

In judicial practice, when qualifying this sign, the main emphasis is placed not only on the fact of the prey obtained, but also on the fact of using a method that in itself creates a general ecological threat.

3. **Game birds included in the "Red List" of Georgia and in a vulnerable state: special status of rare species and hunting during natural disasters or severe drought**

The legislator imposes special severity in cases when fauna with a special status or in a vulnerable state becomes the object of illegal hunting:

- **Species included in the "Red List" of Georgia:** Based on the Law of Georgia "On the Animal World" and the Government Resolution "On Approval of the "Red List" of Georgia", the Red List includes animals and birds that are on the verge of extinction, vulnerable or rare. Hunting such species causes irreparable damage to the ecosystem, since the destruction of each individual directly threatens the survival of the species (Turava, 2021).
- **Game birds in a vulnerable state:** The disposition of the law refers to situations when an animal loses its The ability to defend itself during natural cataclysms, natural disasters (for example, heavy snowfall, fire, flood) or physiological exhaustion (for example, migration period, severe exhaustion).

As local jurisprudence indicates, hunting a helpless animal is both ethically and legally particularly immoral, and carries a high public danger, since the hunter takes advantage of the animal's complete helplessness (Matsaberidze, 2019).

4. **Emergency ecological situation and ecological disaster zone**

The final part of Part 2 of Article 301 of the Criminal Code establishes as aggravating circumstances hunting "**during an emergency ecological situation or in an ecological disaster zone".**

These categories are related to regions or periods where the ecological balance has already been disrupted due to human or natural factors and a special legal regime has been declared. For example, as a result of large-scale forest fires, droughts, epidemics or ecological disasters, the local fauna is already in a critical state, on the verge of survival (Chelidze, 2022). Against this background, hunting, instead of preserving natural resources, plays the role of intensifying the disaster.

Criminal policy assesses such actions as a particularly serious crime, since they are committed in a zone where the ecosystem is most in need of state protection and rehabilitation.

Complex cases of qualification: combination, unfinished crime and complicity: The qualification of illegal hunting (Article 301 of the Criminal Code) for criminal practice and theory often poses a complex challenge. Poaching facts are rarely limited to one simple act; in reality, it is often intertwined with other criminally punishable acts, is committed in a group or remains at the stage of an attempt. The correct qualification of such complex cases is crucial for ensuring the principles of legality and justice (Gvenetadze, 2020). This chapter will discuss in detail the theoretical and practical aspects of combination of crimes, unfinished crime and complicity.

- **Conjunction of crimes: Concomitant illegal hunting with illegal trafficking in firearms (Article 236 of the Criminal Code) and abuse of official authority**

In practice, illegal hunting is often combined with other serious crimes, which leads to a real or ideal combination of crimes. In criminal law dogma, conjunction is present when one person commits several independent crimes, each of which contains elements of a separate component (Turava, 2021).

Concomitant illegal hunting with illegal trafficking in firearms (Article 236 of the Criminal Code)

In the absolute majority of poaching cases, individuals use firearms. An analysis of criminal practice reveals that it is necessary to draw a strict line between illegal hunting (Article 301 of the Criminal Code) and illegal acquisition, storage or carrying of firearms (Article 236 of the Criminal Code):

- If a person has a properly registered hunting firearm, but he hunts in a prohibited place, at a prohibited time or without a permit and "significant damage" is caused, his action is qualified only by Article 301 of the Criminal Code, since possession of a weapon is legal in itself (Ksovreli, 2023).
- In the case when a person hunts with an unregistered, illegally acquired or stored firearm, there is a real combination of crimes – the action should be simultaneously qualified under Article 236 and Article 301 of the Criminal Code. As international practice shows, illegal circulation of weapons represents a separate threat to public safety, which is why its qualification together with poaching fully meets the preventive goals of criminal policy (Birnie et al., 2009).

Coexistence with abuse of official authority (environmental inspectors or public officials)

A particularly difficult category includes cases where individuals whose direct duty is to protect the environment and fauna (for example, employees of the Environmental Supervision Department, gamekeepers or other public officials) participate in illegal hunting. In this case, a combination of abuse of official authority (Article 333 of the Criminal Code) and illegal hunting is evident. An official who uses his status to protect poachers or personally participates in hunting violates not only the ecological order, but also the interests of the state and the authority of the public service (Macsaberidze, 2019). Judicial practice assesses such episodes with particular severity and requires strict cumulative qualification.

- **Unfinished crime (attempt): drawing the line between the preparatory stage and the attempt in poaching**

According to criminal law dogma, a crime may remain unfinished when the action taken by a person does not fully cover the objective signs of the component, although it entails criminal liability (Tkeshelashvili, 2022). The issue of attempt in the context of illegal hunting is one of the most discussed topics in judicial practice.

- **Features of the material component and attempt**

As already noted, Part 1 of Article 301 of the Criminal Code is a crime of material component, since the mandatory sign is the occurrence of "significant damage". According to the general theory of criminal law, an attempt in a material crime occurs when a person intentionally commits an act that is directly aimed at achieving a result, but the result does not occur due to reasons independent of him (Turava, 2021).

Drawing the line between the preparatory stage and the attempt in poaching

In practice, it is difficult to determine where the line is drawn between the preparatory stage of the crime (which is not punishable, with minor exceptions) and the attempt:

- **Preparatory stage:** For example, a person goes to the forest, has a weapon and nets with him, is in a prohibited place, but has not yet started the hunting process (has not searched, has not aimed at the animal). This action is sometimes assessed as a preparatory stage or an administrative offense.
- **Attempted crime:** For example, a person aims at an animal, fires a shot, but misses the target, or severely wounds an animal that manages to escape and material damage (significant damage) does not actually occur due to reasons independent of the poacher (for example, as a result of timely intervention or the escape of the animal). In this case, an attempt at illegal hunting is present (Articles 19-301 of the Criminal Code).

As Sanja Bogojević points out in her preventive analysis of ecological crimes, courts should clearly distinguish between legal recreational movement and criminal attempts to rule out unjust accusations, although a strict approach should be maintained where there is a clear indication of a direct attempt to attack an animal (Bogojević, 2021).

- **Complicity and organized groups: commercial and organized nature of poaching, roles of accomplices (organizer, assistant)**

Modern poaching is often no longer spontaneous or individual in nature, it increasingly resembles an organized criminal business aimed at selling illegal products (e.g., skins, horns or meat of rare animals) on the black market (Chelidze, 2022). Based on the provisions of the General Part of the Criminal Code of Georgia, complicity implies the intentional joint participation of two or more persons in an intentional crime (Gvenetadze, 2020).

Role distribution of accomplices in poaching

In organized forms of illegal hunting, the classic roles of accomplices are clearly distinguished:

- **Organizer:** a person who plans a criminal operation, distributes roles, finances the expedition, or provides black market connections.
- **Performer:** a person who directly carries out the hunting process (shoots, uses mechanical means or traps).
- **Helpers and protectors:** persons who do not participate directly in the hunt, but provide transportation, provide operational information about the movement of animals, or transport and sell illegally obtained products.

The impact of an organized group on qualification and punishment

Despite the fact that the text of Article 301 of the Criminal Code sometimes does not specify the group nature as a separate qualification in all subsections, illegal hunting committed with complicity increases the public danger of the act. In judicial practice, the existence of an organized group is taken into account as an aggravating circumstance when determining the sentence (Ksovreli, 2023). International experts indicate that the fight against poaching will be ineffective if criminal prosecution is limited to punishing only the physical perpetrator and the extensive network of organizers and supporters remains out of focus (Birnie et al., 2009). Therefore, investigative and judicial practice is increasingly focused on the full detection and qualification of all forms of complicity.

Conclusion

A normative analysis of Article 301 of the Criminal Code of Georgia, its general and special components, as well as the study of complex cases of qualification (combination, attempt and complicity) reveals that the fight against illegal hunting (poaching) in the country faces complex theoretical and practical challenges. Although the legislative framework formally covers the main areas of fauna and environmental protection, law-making and judicial practice reveal serious systemic shortcomings that require in-depth academic discussion and reform (Gvenetadze, 2020; Ksovreli, 2023). This section summarizes the main legislative shortcomings, discusses comparative aspects of international best practices, and proposes specific policy recommendations.

Summary of gaps in the legislation and analysis of the heterogeneity of judicial practice

One of the most critical findings of the present study is related to the legislative ambiguity of the material criterion – "significant damage" – provided for in Part 1 of Article 301 of the Criminal Code. Georgian criminal legislation does not contain clear quantitative thresholds, numerical indicators or monetary equivalents at the level of the Criminal Code, which creates a high risk of legal uncertainty and subjective approaches (Tkeshelashvili, 2022).

- **The dilemma of departmental tariffs and expertise:** In practice, the determination of "significant damage" depends almost entirely on the tariffs set by the Ministry of Environmental Protection and Agriculture and individual expert opinions. As local experts point out, this circumstance leads to the fact that the destruction of the same amount of fauna, depending on the context, may lead to different legal assessments in different courts of different instances (Turava, 2021).
- **Heterogeneity of judicial practice:** A study of the decisions of common courts reveals that judges often assess differently the threshold at which "significant damage" begins. In some cases, the court relies only on material and economic damage, while sometimes it tries to take into account the biological damage caused to the ecosystem. This heterogeneity negatively affects the predictability of criminal policy and weakens the preventive function of the law (Chelidze, 2022).

As Sanja Bogojević notes in her discussion of the principles of the rule of law, criminal law norms should be distinguished by exceptional clarity and predictability, so that a person can know in advance the legal consequences of his actions (Bogojević, 2021). The absence of clear quantitative limits seriously contradicts this principle.

Comparative analysis of international best practices

In order to better understand the problems of Georgian reality and ways to solve them, it is advisable to use comparative legal analysis and take into account the experience of Europe and other developed jurisdictions (Birnie et al., 2009).

- **European country approaches:** In EU member states (e.g. Germany, France, Scandinavian countries) environmental crimes are regulated not only by general criminal codes, but also by strictly differentiated special legislation, where the thresholds of damage are calculated using strict scientific and ecological methodology. For example, the German Criminal Code (Strafgesetzbuch - StGB) clearly distinguishes between acts involving danger and material consequences in environmental crimes, where the protection status of the animal population automatically determines the extent of liability without additional ambiguity (Ksovreli, 2023).
- **International standards and strict liability:** International environmental law institutions (e.g., UNEP) indicate that a successful fight against poaching requires harmonization of legal standards among states and the establishment of effective mechanisms for confiscation of criminal assets. The European Union Directive 2008/99/EC on the criminal protection of the environment and its updated versions call on states to establish clear and

strict sanctions, taking into account the scale of damage to the ecosystem (Birnie et al., 2009).

A comparative analysis shows that Georgian legislation shares European values at the principle level, although at the level of mechanisms it requires refinement that excludes subjective interpretations in practice.

Taking into account the problems discussed above and international practice, the following practical and legislative recommendations have been developed within the framework of this article, which are aimed at improving Article 301 of the Criminal Code and increasing the effectiveness of criminal policy:

1. **Clarification of the quantitative criteria for "significant damage" at the legislative level:** It is advisable to amend the Criminal Code of Georgia or its reference norms to define objective criteria for "significant damage" (for example, the number of animals destroyed, their species value, or a minimum monetary equivalent established by the state, exceeding which entails criminal liability). This eliminates legal uncertainty and ensures the principle of equality before the law (Turava, 2021).
2. **Harmonization of methodological standards between criminal and administrative law:** It is necessary to create a unified, scientifically sound methodology between the Ministry of Environmental Protection and investigative/judicial agencies that accurately measures not only physical damage, but also cumulative damage to the ecosystem (Ksovreli, 2023).
3. **Specialized training and institutional strengthening:** In order to develop uniform approaches in practice, it is recommended to conduct regular specialized trainings for judges, prosecutors and investigators on environmental crimes and biodiversity management issues (Chelidze, 2022).
4. **Strengthening the fight against organized poaching:** Since illegal hunting is increasingly becoming organized, legislation and law enforcement agencies should pay more attention to identifying and strictly prosecuting all forms of complicity (especially organizers and sellers of illegal products) (Matsaberidze, 2019).

As a result of implementing the above legislative and practical measures, it will be possible to form an effective ecological criminal policy in Georgia, which will ensure the proper protection of the animal world and natural resources for future generations.

Thus, the paper discusses the theoretical and practical aspects of the criminal analysis of illegal hunting (poaching) provided for in Article 301 of the Criminal Code of Georgia. The study showed that despite the fundamental importance of constitutional guarantees and ecological security, the practical application of the norm faces many dilemmas, among which the ambiguity of the material sign of "significant damage" occupies a central place.

The article analyzed in detail the general composition of the action (objective and subjective sides), special (aggravating) components (state reserves, mechanical and mass destruction means, red list species, helpless situation and emergency ecological situation), as well as complex cases of

qualification – a combination of crimes with illegal circulation of firearms and abuse of official authority, unfinished crime (attempt) and complicity by organized groups.

Based on the findings of the study, we can conclude that Georgia's criminal policy against illegal hunting needs to be improved. Clarifying the quantitative criteria for "significant damage" through legislation and harmonizing legal practice is a necessary prerequisite for increasing the preventive effectiveness of environmental crimes and ensuring the sustainable protection of the country's biodiversity.

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The Empirical Research of The Culture of Forming Monetary Savings in Georgia

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Abstract

The expansion of a culture of forming monetary savings among people is a priority for any country, as it has a great impact on the growth of total national savings and stimulates investment. Its formation is a highly complex task affected by several factors, like economic and psychological.

In Georgia, the culture of accumulating monetary savings is still on early stage of development. In order to support it, banks offer customers a variety of banking products, which build trust and provide returns in the form of interest income. Nevertheless, society turns to alternative ways to maximize returns by saving temporarily available funds.

The aim of this paper is to study trends and dynamics of the culture of forming monetary savings in Georgia, for which empirical research will be conducted. The subject of this study is reasons which discourage people from accumulating monetary savings.

During the research process the culture of forming monetary savings will be investigated, for which the analysis of the respondent's data will be used.

Based on the results, a modern picture of the culture and views on the future perspectives will be presented. The findings will be prolific both for the representatives of banks and consumers.

Keywords: Monetary savings, banking products, temporarily available funds, trust.

Introduction

The relevance of the research: People accumulate savings with temporarily available funds, thereby generating highly liquid assets which will be used to satisfy own requirements. Also, the psychological factor plays an enormous role in accumulating monetary savings, because people partially safeguard unexpectable situations, and form funds for investment. Forming monetary savings has always played a tremendous role in economic development of any country.

The events of the 1990s in Georgia deserve special attention. When the Soviet Union collapsed, Georgia underwent hyperinflation, which led to a banking default. The assets of the banks were frozen and individuals were not able to return their money, which lowered the level of trust towards financial institutions.

While dwelling in normal conditions, a person is avid to earn interest, so he/she puts temporarily available funds in banks. This type of relationship strengthens partnership between a client and the bank. Additionally, in order to attract customers, banks create novel banking products/services and offer good terms.

The **aim** of the research is to study the culture of forming monetary savings.

The **objectives** of the research are to rate the current situation, determine the trend of the culture of accumulating monetary savings and study thoroughly determinants of it.

The **scientific discovery** of this paper is to rate the culture of forming monetary savings by analyzing the results of a conducted survey.

The practical significance of the paper: The conclusions will help individuals to acquire knowledge about the culture of forming monetary savings. Furthermore, banking/financial institutions will be given an opportunity to offer good terms to the consumers regarding forming savings and becoming trustworthy among the people.

Main text

From the "Principles of Economics" by Gregory Mankiw, it is known that savings equal investment and the improvement of those key indicators contribute to the economic development of any state (Mankiw, 2004). However, money was not always the only asset, which could have been saved. Everything started with surplus goods, then continued with treasure and today money is dominating. The main reason is that money is a highly liquid and universally accepted equivalent asset worldwide. The first steps of developing the culture of forming monetary savings appeared in Mesopotamia, where surplus grains served as savings (Sagert, 2025).

The existence of temporarily available funds determined the culture of accumulating monetary savings. The velocity of its development depends on the state's current financial and economic situation. For instance, the citizens of Georgia were not able to retrieve their savings in the 1990s, because the annual inflation reached 15,600%, which made the currency lose its purchasing power (Independent Evaluation Group, 2009). Also, the assets of the banks were frozen. As a result, about 672 million GEL worth of savings were lost (Gabritchidze, 2023).

Comparing to the current indicators, the condition of Georgia has improved. Based on the latest information released by the national statistics office of Georgia, inflation rate is 5.8% (National Statistics Office of Georgia, 2026). This factor has a great impact on the sum of the deposits made by the individuals of the country. Throughout the years, the sum of deposits has risen, and in May 2026 it has reached approximately 36.9 billion GEL. Deposits of 15.0638 billion GEL have been made in the national currency and 21.9197 billion GEL has been deposited in foreign currency by the individuals (National Bank of Georgia, 2026). This fact highlights the level of trust towards national and foreign currencies.

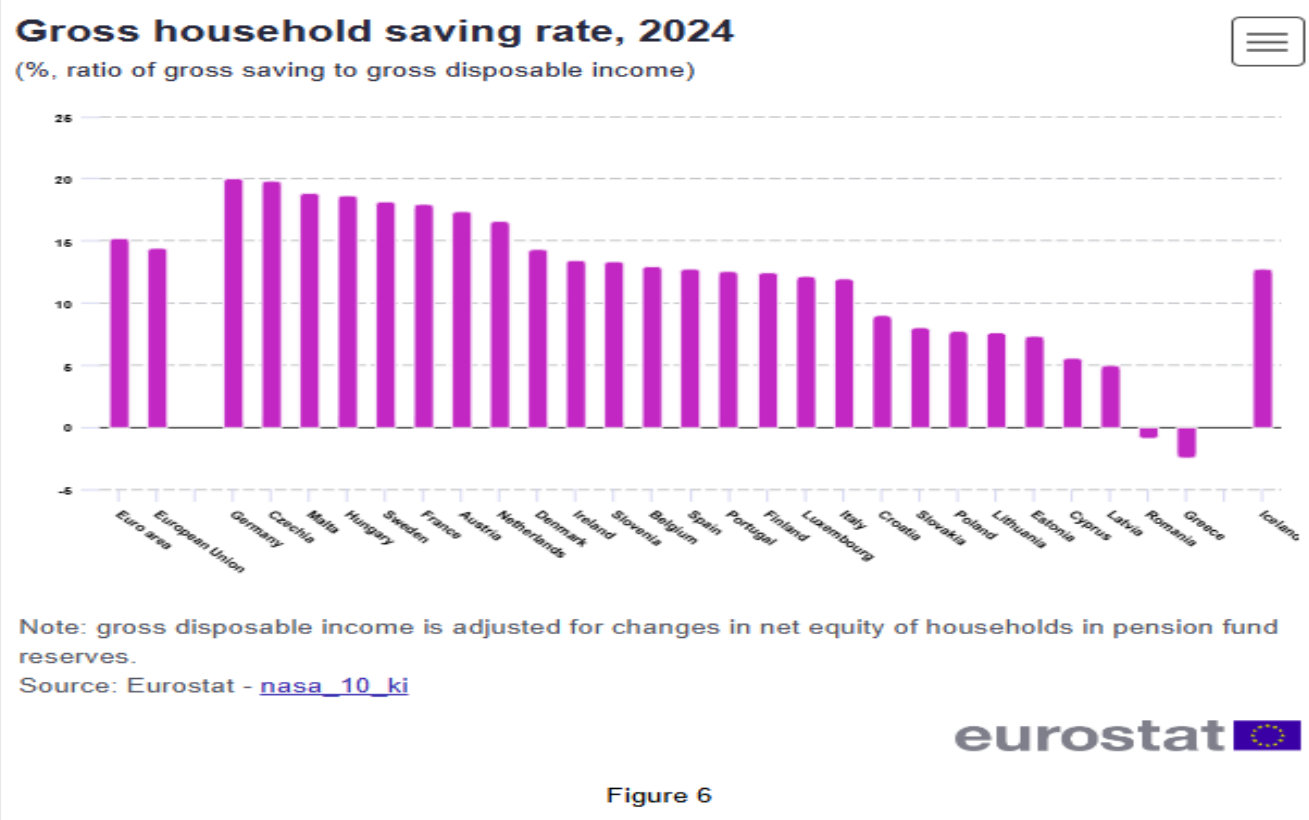
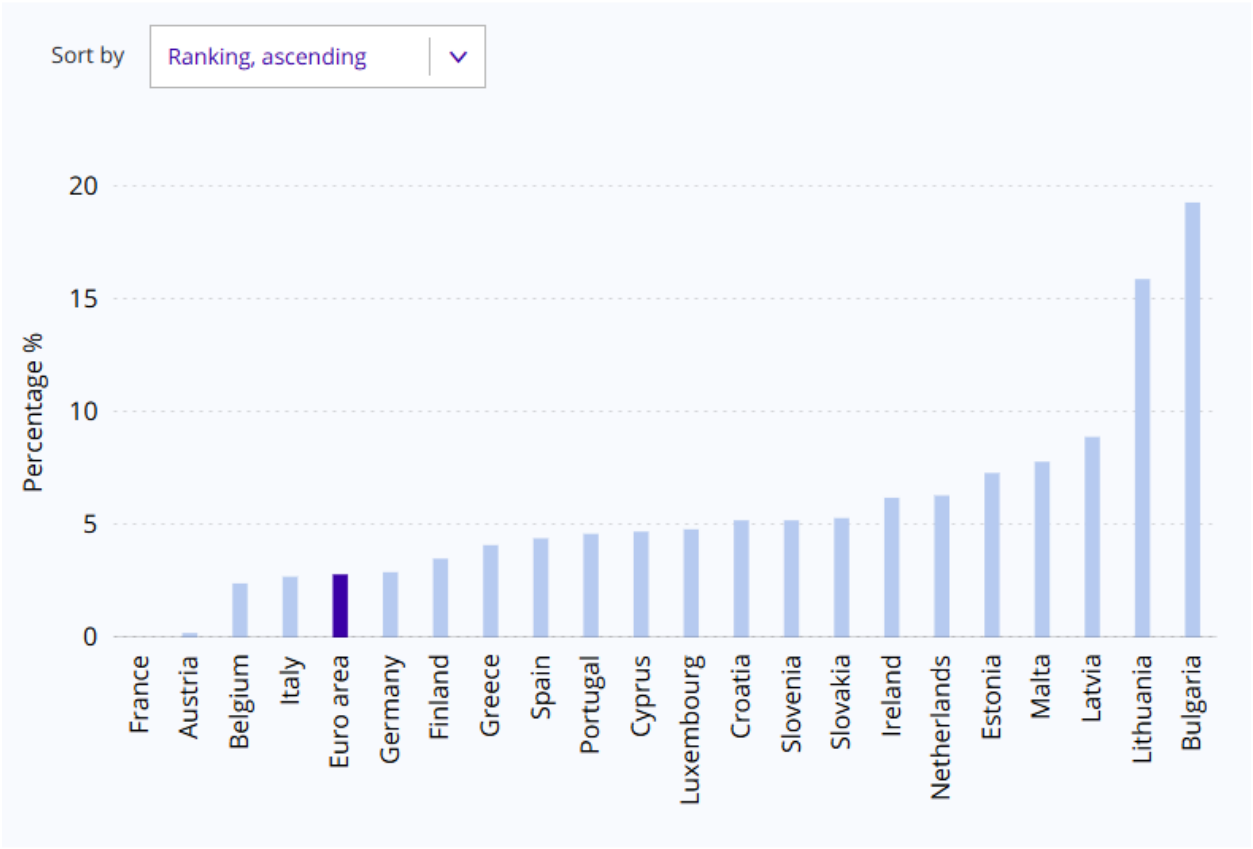


Figure 6

Source: (eurostat, 2024, Table 1)

Based on this diagram, it is noticeable that in 2024 the citizens of Romania and Greece could not form monetary savings. In this case, the multitude of households could not put aside a certain amount of money, because their expenses exceeded their monthly income. It is significant to underline that in those states the culture of accumulating monetary savings was not developed.



(European Central Bank, 2026, Table 2)

On this diagram it is visible that after 2 years Greece was able to develop the culture in the country. There is a possibility that the post-pandemic period could affect the overall financial and economic conditions. The fact that the leader among the listed countries is Bulgaria, should be highlighted. This indicator for Bulgaria is a result of joining the Eurozone and maintaining acceptable key and effective rates. Bulgaria managed to expand and develop the culture of forming monetary savings, which can be clarified with the recent statistics. In 2025, deposits made by the citizens amounted to 47.7% of GPD – 107.076 billion Bulgarian Lev. From December 2024 to December 2025 deposits of households and NPISHs increased by 19.8%, which underlines the trust of people towards financial institutions and their ability to put aside temporarily available funds in order to receive interest rate (The Sofia Globe staff, 2026).

The top 3 operating banks in Georgia offer clients to make deposits, purchase certificates of deposits or invest in several stocks. In return, they will receive an interest rate. For example, JSC (Joint-stock company) “Bank of Georgia” offers consumers to create term, accumulative and child deposits. JSC “TBC” provides clients with an altered variety of depositary services like: “My Money Box”, “My Safe”, “My Goal”, “Our Shared Goal”. Besides usual forms of deposits and certificates, JSC “Liberti Bank” offers the “Savings Account Meti”. It should be noted that terms and effective interest rates vary. Banks allow clients to make deposits in a few currencies.

Even though the interest rate of deposit in national currency is higher, the multitude of Georgians prefers to deposit in foreign currencies like USD. The main key factor, which has an enormous impact on that is trust and level of dollarization. For instance, the currency is more reliable if it is not very sensitive towards economic shocks and financial crises.

In order to stimulate the expansion of the culture of accumulating monetary savings in Georgia, deposit insurance agency of Georgia was founded. From the 1st April in 2026, the reimbursable amount went from 30 000 GEL to 50 000 GEL. Deposits of individuals worth of more than 14.191 billion GEL are insured by this agency (Deposit Insurance Agency of Georgia, 2026). Nevertheless, some individuals prefer to turn to alternative ways, such as purchasing gold or keeping savings at home.

In the past, gold was the equivalent of money and always valued by society. Nowadays, a group of individuals prefers to purchase gold, because it is a precious metal and its price is rising.



(goldprice.org, n.d., Table 3)

This diagram displays the tendency of prices from the past century. It is clearly visible that gold was becoming more expensive from time to time. However, during economic downfalls, in some periods of time it was becoming less pricey, for example in 1983 and in 2015.

In contrast, some people choose to keep their savings at home, and their arguments are reasonable too:

- They consider the condition that they will not be able to retrieve their assets due to the default of banking/financial institutions, because the assets of those institutions would be frozen;
- They prefer to have their assets on hand and use them whenever needed without breaking the deposit agreements with banks. They would not have to visit banks, lose interest rate and time.

This alternative also stimulates people to form monetary savings, but keeping money at home has its own cons too: Money does not circulate, so it cannot perform part of its functions. Furthermore, considering dynamic and variable environment, money is constantly losing its value due to the inflation

and other core factors. For example, in "Principles of Economics" by Gregory Mankiw, we read Yogi Berras's words: "A nickel ain't worth a dime anymore" (Mankiw, 2004, p. 524).

In order to attract more persons to accumulate monetary savings, JSCs like "Bank of Georgia" and "TBC" offer clients to open investment accounts, purchase cryptocurrency and become owners of shares. It is significant to mention that these JSCs offer consumers to start building portfolios from $1, which makes investing accessible and available for everybody. Additionally, people do not have to visit bank branches in order to purchase market shares or cryptocurrency. It is possible to be done in a mobile phone. Currently, the main concentration is cryptocurrency. Therefore, investment plays an enormous role in providing economic well-being in any state.

Based on the goals of the research and in order to collect data, an online survey created using Google Forms was used. 100 consumers participated in the survey. The questions were about: The ability to form monetary savings across multiple and different age categories, prioritized ways of accumulating savings, the main reasons for refusal, experience with using deposit accounts and the usage of investment accounts. In order to receive realistic answers, answering all questions was not obligatory, which is why in some cases, the sum of percentages may not be 100%.

Analysis of the results identified that:

- 71% of participants form monetary savings;
- 56% place own assets in banks, 22% keep savings at home, 5% purchase gold with the extra sum of money.
- The main reason which discourages individuals from accumulating monetary savings is insufficient income (Opinion of 30.2%), 9.4% named the lack of willpower.
- Those, who prioritized keeping own monetary savings at home, stated that they prefer to have money on hand in order to use it on purpose (25.8%), 4.1% does not trust the banking/financial institutions and only 1% cannot manage to form monetary savings.
- Regarding deposit terms, 37.2% of respondents did not breach the agreements and continued their relationship with the bank until the end of the contract. 31.9% of participants mostly did not break their deposit agreements, but 14.9% had an opposite experience by breaching the terms. 16% of consumers broke the agreement and used the money to cover their expenses.
- 55.6% do not use investment accounts, 24.2% are not aware of this innovative banking product and 20.2% are using these accounts actively at the moment.
- 45% of respondents were between 18-35 years old, 22% - 56-65, 11% - 36-45, 3% - more than 65 years old. Mostly, individuals aged 36-45 and 46-55 use investment accounts. 2 individuals aged more than 65 stated that they do not trust banks, which can be partially explained by the events of the 1990s.

Undoubtedly, financial literacy plays a huge role in forming the culture of monetary savings in any country. Without acquiring knowledge about interest rate, savings, investment accounts and several banking products, people will not be able to consider accumulating monetary savings. In 2013, conducted research showed that 71% of participants were able to define the compound interest, 46% understood the effects of inflation. However, only 19% knew about risk diversification, which means that in 2013 stock market was not developed in Georgia. The fact that the multitude of participants, who gave correct answers had completed higher education (Grigolia, 2013).

With the help of the research conducted by the OECD in 2020, it is possible to review the condition of Georgia regarding the level of financial literacy after 7 years. Georgian participants achieved 12.1 points out of 21, which is 57.6%. The 76% of respondents were able to answer questions about purchasing power of money, 89% understood the meaning of interest of a loan, 24% could calculate simple interest. In most cases, Georgians showed the highest results compared to other countries (OECD, 2020). Currently, the tendency is promising, which will increase financial literacy indicators in Georgia. Still, stock market and investment do not take a dominating place in Georgians' lives, which was also confirmed with the results of our survey – 24.2% of participants did not have any information about stock market and investment.

Conclusion

The culture of saving in Georgia continues to expand – 71% of participants can form monetary savings, yet approximately 30% cannot keep money in a savings account until the deposit matures. Citizens try to accumulate monetary savings and use novel banking products such as investment accounts. Already 20.2% of participants use them actively. This factor gives an opportunity of predicting a promising future in this field.

Nowadays, Georgians prefer putting own savings on deposits and earning interest while keeping money safe at banks (56% of participants choose deposits). It is significant to mention that deposits of 14.191 billion GEL formed by individuals are insured by the deposit insurance agency of Georgia. 37.2% can keep own savings in banks before the deposit matures. This means that those individuals have additional financial resources to cover unforeseen expenses. The main factor, which compels people to give up on forming monetary savings is insufficient income (Opinion of 30.2%).

Another alternative, which is appealing to 5% of participants of the survey is purchasing gold. The upward trend of gold prices makes people believe that they will be able to make extra profit. However, even in the 21st century, some humans are avid to keep their savings at home rather than keeping money in banks. 25.8% choose to have money on hand in order to use it whenever it is necessary.

The key factor, which plays a great role in each country, is financial literacy. The fact that citizens of Georgia were able to answer to several questions better than representatives of other countries, should be underlined. This means that positive trend can be predicted.

To conclude, the culture of forming monetary savings in Georgia will develop if banks do not stop offering consumers several novel banking products/services and people have enough financial resources to put aside. In addition, overall economic well-being and currency stability play an enormous role. Paying attention to these factors is crucially significant, because today's environment is dynamic, demand is variable and global conditions change rapidly.

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Geopolitical Uncertainty and the Reconfiguration of Global Supply Chains

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Abstract: The modern global economy operates in an environment of increasing geopolitical uncertainty, international conflicts, trade restrictions, sanctions, and systemic risks in supply chains. These processes have fundamentally changed the international business environment and called into question traditional business models that have been based on cost minimization, global offshoring, and just-in-time production for decades. The new geoeconomic reality is forcing companies to rethink the structure and management strategies of supply chains, where resilience, flexibility, and the ability to adapt to risks, along with operational efficiency, are increasingly becoming important factors of competitive advantage.

The aim of the article is to assess the impact of geopolitical uncertainty on the process of reconfiguring supply chains and to analyze the main strategies that allow modern companies to reduce the impact of global risks. Special attention is paid to the limitations of the historical model of offshoring, which are due to geographical distance, transportation delays, political instability and excessive dependence on critical suppliers. In this context, the strategies of near-shoring and friendshoring are discussed as effective mechanisms for strengthening the sustainability and reliability of supply chains. It is shown that the proximity of production and suppliers to consumer markets or politically reliable partner countries reduces logistical risks, increases operational flexibility and improves the ability to respond to crises.

The study also analyzes the economic and environmental aspects of these strategies. Although nearshoring may increase operating costs in the short term, the integration of digital technologies, automation and artificial intelligence significantly reduces these costs and increases the efficiency of supply chains. In addition, the impact of regionalization on reducing transportation distances, reducing carbon emissions and improving environmental sustainability is assessed. The study results show that global supply chains are gradually moving towards a hybrid model, where the traditional approach to globalization is gradually being replaced by regionalization principles. Practical recommendations are presented for business and policy makers aiming to strengthen the sustainability of supply chains, effectively manage geopolitical risks and maintain competitiveness in a rapidly changing international environment.

Keywords: geopolitical uncertainty; supply chain reconfiguration; supply chain sustainability; Near-shoring; Off-shoring; Friendshoring; Regionalization; Global logistics.

ანოტაცია: თანამედროვე გლობალური ეკონომიკა ფუნქციონირებს მზარდი გეოპოლიტიკური გაურკვევლობის, საერთაშორისო კონფლიქტების, სავაჭრო შეზღუდვების, სანქციებისა და მიწოდების ჯაჭვების სისტემური რისკების პირობებში.

აღნიშნულმა პროცესებმა არსებითად შეცვალა საერთაშორისო ბიზნესის გარემო და კითხვის ნიშნის ქვეშ დააყენა ტრადიციული ბიზნესმოდელები, რომლებიც მრავალი ათწლეულის განმავლობაში ეფუძნებოდა ხარჯების მინიმიზაციას, გლობალურ ოფშორინგსა და „ზუსტად დროში“ (Just-in-Time) პრინციპით ორგანიზებულ წარმოებას. ახალი გეოეკონომიკური რეალობა კომპანიებს აიძულებს, გადახედონ მიწოდების ჯაჭვების სტრუქტურასა და მართვის სტრატეგიებს, სადაც კონკურენტული უპირატესობის მნიშვნელოვან ფაქტორად ოპერაციულ ეფექტიანობასთან ერთად სულ უფრო მეტად ყალიბდება მდგრადობა, მოქნილობა და რისკებისადმი ადაპტაციის უნარი.

სტატიის მიზანია გეოპოლიტიკური გაურკვევლობის გავლენის შეფასება მიწოდების ჯაჭვების რეკონფიგურაციის პროცესზე და იმ ძირითადი სტრატეგიების ანალიზი, რომლებიც თანამედროვე კომპანიებს საშუალებას აძლევს, შეამცირონ გლობალური რისკების გავლენა. განსაკუთრებული ყურადღება ეთმობა ოფშორინგის ისტორიული მოდელის შეზღუდვებს, რომლებიც განპირობებულია გეოგრაფიული დისტანციით, სატრანსპორტო შეფერხებებით, პოლიტიკური არასტაბილურობითა და კრიტიკულ მომწოდებლებზე გადაჭარბებული დამოკიდებულებით. ამ კონტექსტში განხილულია ნიარშორინგისა (Near-shoring) და ფრენდშორინგის (Friend-shoring) სტრატეგიები, როგორც მიწოდების ჯაჭვების მდგრადობისა და საიმედოობის გაძლიერების ეფექტიანი მექანიზმები. ნაჩვენებია, რომ წარმოებისა და მომწოდებლების სამომხმარებლო ბაზრებთან ან პოლიტიკურად სანდო პარტნიორ ქვეყნებთან დაახლოება ამცირებს ლოგისტიკურ რისკებს, ზრდის ოპერაციულ მოქნილობას და აუმჯობესებს კრიზისებზე რეაგირების შესაძლებლობას.

კვლევაში ასევე გაანალიზებულია აღნიშნული სტრატეგიების ეკონომიკური და გარემოსდაცვითი ასპექტები. მიუხედავად იმისა, რომ ნიარშორინგმა შესაძლოა მოკლევადიან პერიოდში გაზარდოს საოპერაციო ხარჯები, ციფრული ტექნოლოგიების, ავტომატიზაციისა და ხელოვნური ინტელექტის ინტეგრაცია მნიშვნელოვნად ამცირებს ამ დანახარჯებს და ზრდის მიწოდების ჯაჭვების ეფექტიანობას. დამატებით შეფასებულია რეგიონალიზაციის გავლენა ტრანსპორტირების მანძილის შემცირებაზე, ნახშირბადის ემისიების შემცირებასა და ეკოლოგიური მდგრადობის გაუმჯობესებაზე. კვლევის შედეგები აჩვენებს, რომ გლობალური მიწოდების ჯაჭვები თანდათან გადადის ჰიბრიდულ მოდელზე, სადაც გლობალიზაციის ტრადიციული მიდგომა თანდათანობით რეგიონალიზაციის პრინციპებით ინაცვლებს. წარმოდგენილია პრაქტიკული რეკომენდაციები ბიზნესისა და პოლიტიკის შემმუშავებლებისთვის, რომლებიც მიზნად ისახავს მიწოდების ჯაჭვების მდგრადობის გაძლიერებას, გეოპოლიტიკური რისკების ეფექტიან მართვას და კონკურენტუნარიანობის შენარჩუნებას სწრაფად ცვალებად საერთაშორისო გარემოში.

საკვანძო სიტყვები: გეოპოლიტიკური გაურკვევლობა; მიწოდების ჯაჭვის რეკონფიგურაცია; მიწოდების ჯაჭვის მდგრადობა; ნიარშორინგი (Near-shoring); ოფშორინგი (Off-shoring); ფრენდშორინგი (Friend-shoring); რეგიონალიზაცია; გლობალური ლოგისტიკა.

Introduction: The global economic order, which for the past three decades has been based on the principles of "hyperglobalization" and efficiency, is undergoing a historic transformation. The business models established in the late twentieth and early twenty-first centuries, which were focused on "Just-in-Time" supply systems, economies of scale, and low-cost offshore production, are facing a serious systemic crisis. This crisis is not only economic in nature; it is deeply rooted in geopolitical realities, where national security and continuity of supply are increasingly replacing the traditional imperative of cost minimization. The traditional architecture of global supply chains, based on the doctrine of the "primacy of efficiency," relied on stable international relations, open markets, and predictable logistics corridors. However, events in recent years - the Covid-19 pandemic, the Russia-Ukraine war, tensions in the Middle East, and the trade and technology rivalry between the US and China - have radically changed the risk profile of international trade. The pandemic has exposed critical vulnerabilities in supply chains: when production is concentrated in one or a few geographic areas, even a small disruption can have a cascading effect that threatens the functioning of the global economy.

Geopolitical uncertainty has become the "new normal" for companies today. Sanctions policies, export controls, and the nationalization of strategic industries are forcing corporations to reassess their global presence. If earlier decisions were made based on the principle of "the cheapest supplier," today the priority has become the search for "safe and reliable" partners. This is where the fundamental role of "resilience" comes into play. Resilience, as a strategic goal, implies the ability of a system not only to withstand external shocks, but also to quickly restore its functioning after a crisis. Optimization, which was yesterday the main lever of competitiveness, is today perceived as a source of risk, as it often implies minimal stocks and excessive specialization, which makes the production cycle inflexible.

Against the backdrop of these changes, production reorganization strategies such as "near-shoring" and "friend-shoring" have become key tools. Near-shoring, or moving production geographically closer to consumer markets, reduces logistics time and transportation risks. In turn, friendshoring connects economic activity with political space - companies move production capacities to countries that share common political values and reliable trade relations. These processes, although associated with increased operating costs, provide long-term stability, which is critically important in today's uncertain geopolitical environment. Moreover, the development of digital technologies, robotization, and artificial intelligence has created the opportunity for high-cost countries to once again become attractive manufacturing centers. Automation neutralizes the competitive advantage of countries with low labor costs, which makes it easier to implement nearshoring. Accordingly, we see not only the displacement of supply chains, but also their qualitative transformation.

This article aims to systematically analyze these trends. We consider how supply chain management is transforming from a reactive to a proactive model. The article examines in detail the structural barriers that companies face when reconfiguring, including infrastructural constraints and a shortage of qualified personnel. At the end of the study, we summarize why the "regionalization of globalization" is an inevitable process and what strategic steps business leaders must take to survive in the new geopolitical reality.

Literature Review: The contemporary academic discourse on supply chain management is undergoing fundamental changes. Recent studies confirm that traditional models, based on the principles of so-called "Lean Management" and "Just-in-Time" (JIT), are experiencing a systemic crisis in the face of new geopolitical challenges (Baldwin & Freeman, 2025).

The Offshoring Paradigm and Its Criticism Historically, the economic literature has viewed offshoring as an efficient way to transfer production activities to developing countries, which was based on the global division of labor (Gereffi, 2026). Studies emphasize that offshoring has contributed to the hyperintegration of the world economy, but it has also created a "paradox of vulnerability." Levy and Reitzig (2026) note that the excessive emphasis on cost minimization has reduced systemic resilience, which has proven disastrous during the shocks of the 2020s.

Nearshoring and Friendshoring: A Strategic Response A new academic literature is actively discussing nearshoring and friendshoring as key tools for managing supply chain risks. Javorcik (2025) argues that friendshoring is a result of geopolitical fragmentation, where economic activity is more tied to political alliances than to pure market logic. Zhu et al. (2025) emphasize in their systematic review that localization of production not only increases logistical efficiency, but also improves standards of corporate responsibility.

Technological and environmental aspects Modern researchers, such as Wang and Zhang (2026), focus on technological factors. According to their study, "Industry 4.0" technologies - automation and artificial intelligence - are a catalyst for nearshoring. Automation neutralizes the advantage of low labor costs, which allows developed countries to return to manufacturing. In addition, the increase in ESG (environmental, social and governance) regulations, as noted by Marouf and Moukadam (2026), forces companies to reduce transportation distances, which automatically pushes them towards nearshoring.

An analysis of the existing literature reveals that the theory of supply chain management is undergoing an evolution - from "economy" to "resilience". Although there is a consensus on the need for this transition, there is still a gap in research regarding the difficulties of practical implementation, especially in terms of infrastructural readiness of emerging economies (World Economic Forum, 2026). This article serves to systematize these challenges and analyze practical strategies.

Methodology: This study is based on a qualitative research methodology, which aims to provide a comprehensive understanding of supply chain reconfiguration processes. The following methods were used in the research process:

1. Systematic literature review: A critical synthesis of academic publications, analytical reports and strategic reviews of the last 5 years (2021-2026) was carried out. This method allows us to identify theoretical consensus and existing research gaps.
2. Comparative Framework: The article uses a comparative analysis between the "offshoring" and "nearshoring/friendshoring" models. The comparison is made according to parameters such as: logistical risks, capital expenditures, political vulnerability and environmental impact (ESG).

3. Synthetic analysis: Based on the obtained data, hypotheses are verified, which allows us to make generalizations about the functioning of modern supply chains.

It is worth noting that the study is limited to the analysis of secondary data. Although this method allows us to see the broad picture, it does not include the internal financial documentation of specific corporations, which is a potential area for further research.

Research questions: Main research question:

How does the increase in geopolitical uncertainty affect supply chain management strategies and what factors determine the choice of companies between offshoring and nearshoring/friendshoring?

Supporting research questions:

1. What role does technological automation (Industry 4.0) play in optimizing operating costs when implementing nearshoring?
2. How do environmental (ESG) regulations and national security policies influence companies' decision to abandon traditional offshoring?
3. What are the main infrastructural and skills-related barriers to supply chain regionalization?

Hypothesis:

Main Hypothesis H1:

- Increased geopolitical uncertainty is directly related to resilience-oriented reconfiguration of the supply chain, where companies, despite the increase in initial capital expenditures, prefer nearshoring/friendshoring, because in the long run this strategy reduces systemic risks and increases competitiveness.

Supporting hypotheses:

- H2: A high level of technological automation acts as a mediator in the transition from offshoring to nearshoring, neutralizing the negative effect caused by increasing labor costs.
- H3: Industries with high sensitivity to geopolitical risks (e.g., semiconductors, pharmaceuticals, energy) reconfigure faster than sectors with low risk.

Main part: In the late twentieth century and early twenty-first century, "offshoring" was a fundamental cornerstone of global business strategies. This model was based on the relocation of production processes to developing countries, where production costs were significantly lower. During this period, companies massively outsourced operations or directly invested in projects in China, Vietnam, India and other countries of South Asia, which led to an unprecedented pace of integration of the world economy.

The success of offshoring was due to three main factors: economies of scale, which allowed manufacturers to increase volume and reduce the cost of production per unit; cheap labor, which was especially important for labor-intensive industries (textiles, electronics, household appliances);

Global integration, which meant improving transport logistics and reducing international trade barriers. As a result, the world became a single, interdependent production space, where the cost of production was minimized.

However, the refinement of this model paradoxically increased the fragility of supply chains. The main vulnerabilities of offshoring were identified in three areas:

- Geographical distance: the "just-in-time" supply model required a continuous logistics chain, where even a slight disruption in sea and air transportation caused the halt of production processes in consumer markets.
- Transportation risks: global supply chains became overly dependent on critical transport arteries (e.g., the Suez Canal, the Strait of Malacca). The closure or disruption of these routes proved that the pursuit of cost minimization undermined the risk management component.
- Vulnerability to political instability: The concentration of production bases in authoritarian or politically unstable regimes has created the potential for political blackmail. Trade restrictions, export controls, and diplomatic tensions directly impact the shareholder value and operational sustainability of corporations.

Thus, the historical perspective has shown us that offshoring has provided economic growth in the short term, but in the long term it has created systemic flaws that cannot be ignored in today's geopolitical reality.

The disruption of the traditional model of global supply chains and the aggravation of geopolitical risks have forced multinational corporations to make strategic decisions regarding the reconfiguration of production capacities. Two main strategies have come to the fore in modern business practice: near-shoring and friendshoring, which are aimed at "bringing closer" the supply chain and increasing the level of security.

Near-shoring involves the transfer of production processes to countries that are geographically close to the main consumer markets. For example, in North America, US corporations are increasingly using the production potential of Mexico, and in Europe - the regions of Eastern Europe and Turkey. Such an approach provides a significant reduction in transportation times, optimization of inventory stocks, and the convergence of time zones, which simplifies management processes (Javorcik, 2025).

Friendshoring, on the other hand, involves structuring economic activity in a political context. This strategy involves locating production in countries that share the political values and security interests of the host country (Levy & Reitzig, 2026). The main motive for this approach is to minimize the risks of sanctions, trade embargoes, and geopolitical blackmail. As international

trade policy scholars note, friendshoring is a response to geoeconomic fragmentation, where trade relations develop within the framework of "value alliances" (International Monetary Fund, 2026).

The advantages of these strategies are multifaceted:

- Short supply chains: Geographic proximity reduces dependence on long-distance maritime routes and increases responsiveness to changes in market demand.
- Risk management: Manufacturing in politically stable or allied countries reduces the likelihood of critical component supply disruptions.
- Operational transparency: Closer collaboration and frequent communication with suppliers improves quality control and compliance with corporate social responsibility (CSR) standards (Zhu et al., 2025).

Nevertheless, nearshoring and friendshoring are not without their challenges. They are often associated with high initial production costs and the scarcity of certain resources or competencies that have historically been concentrated in Asia. Nevertheless, from a strategic perspective, companies view these costs not as a loss, but as an "insurance premium" in the face of global instability.

Supply chain reconfiguration, from traditional offshoring to hybrid models of nearshoring and friendshoring, is not just a logistical change; it is a fundamental strategic shift that requires companies to reassess their cost structures, operational processes, and risk management. This chapter presents a comparative analysis and detailed discussion of the driving forces that are shaping the future of supply chains in today's geopolitical reality.

Comparing traditional models with the new reality should be viewed primarily through the prism of "economic compromise" (Trade-off). Offshoring, as a cost optimization tool, relied on low labor costs and economies of scale. However, today's analysis shows that the "low unit cost" achieved by offshoring often ignored the "hidden costs" — transportation risks, inventory management difficulties, and financial losses resulting from geopolitical shocks.

The transition to nearshoring at first glance increases operating costs, since production is transferred to relatively high-cost locations. Nevertheless, from a strategic management perspective, these costs should be viewed as a "risk insurance premium." When a company shortens its supply chain, it gains the benefits of greater flexibility, faster response to market demands, and freeing up inventory capital. As a result, despite possible increases in manufacturing costs, the "Total Cost of Ownership" (TCO) often remains low or stable, as downtime losses due to crisis periods are reduced (Baldwin & Freeman, 2025).

One of the main drivers that makes nearshoring economically viable is the widespread adoption of Industry 4.0 technologies. In the past, offshoring was popular because the level of automation was low and labor-intensive processes were unprofitable without cheap labor. Today, robotization, artificial intelligence, and additive manufacturing (3D printing) are radically changing this equation. Automation minimizes the dependence on human resources, which means that the location of production is no longer strictly tied to the level of wages in a country. High-tech enterprises that are fully automated can successfully operate in the US or Europe, as

the share of labor in the cost of production decreases. This technological leap makes nearshoring a viable option and reduces the dependence on "emerging markets" (Wang & Zhang, 2026).

Another important driver of supply chain reconfiguration is environmental, social and governance (ESG) standards. Global supply chains are responsible for a significant share of carbon emissions, which come from maritime and air transport. Reducing transportation distances (nearshoring) has a direct impact on reducing a company's carbon footprint, which is increasingly being demanded by investors and consumers. In addition, regulations adopted by the European Union and the United States, which oblige companies to monitor the ethics and environmental impact of their supply chains, make offshoring even riskier. Ensuring supply chain transparency in remote locations is extremely difficult, while control is much more effective in a regional context. Thus, regulations and ESG requirements provide a "natural" incentive for the process of nearshoring (Zhu et al., 2025).

Comparative analysis matrix

Characteristic	Traditional Offshoring	Nearshoring/Friendshoring
Main priority	Cost minimization	Resilience/Security
Logistics risk	High (long chains)	Low (Short Chains)
Technological base	Labor-intensive	Automated/Innovative
Geopolitical dependence	High (vulnerable)	Low (Partnership)
Environmental impact	High emissions	Low Emissions

We can say that the reconfiguration of supply chains is not a one-time act, but an ongoing process. Companies that successfully make this transition use a hybrid approach - they maintain some global ties, but regionalize critical components and production. The driving forces - technological development, the need to manage risks, and environmental responsibility - are collectively creating a new economic paradigm, where stability is valued more than immediate economic gains.

Reconfiguring supply chains, despite its strategic necessity, is not a painless process. The move towards nearshoring and friendshoring requires not only capital investments, but also a fundamental transformation of existing ecosystems. Managers and policymakers face complex challenges that limit the pace and effectiveness of transformation.

One of the main obstacles to moving production from offshore locations to nearshoring zones is infrastructure readiness. For decades, developing Asian countries have invested in specialized manufacturing zones, ports, and logistics hubs optimized for large-scale exports. Potential new nearshoring locations (such as Eastern Europe or parts of Latin America) often require large-scale investments in stable electricity supplies, transportation networks, and digital infrastructure. Infrastructure deficits directly increase project implementation times and capital costs, which hinders the reconfiguration process (Gereffi, 2026).

Regionalization of production requires specific skills in the workforce. While automation reduces reliance on cheap labor, it increases the demand for technical specialists, roboticists, and supply chain management analysts. Many developed and developing countries, where nearshoring is a

priority, are experiencing a "skills gap." Education systems are unable to keep up with rapid market changes, forcing companies to spend additional resources on training and retention, which in the long run leads to increased operating costs (Wang & Zhang, 2026).

Reconfiguration naturally increases initial costs. Replacing the "cheap labor" model with nearshoring is often associated with an increase in production costs of 15-30%. As the global economy struggles with inflationary pressures and a high interest rate environment, access to capital becomes more difficult. Companies are forced to make a trade-off: either pass on increased costs to customers, which reduces their market competitiveness, or reduce margins. This dilemma is especially acute for medium-sized enterprises, which lack the financial "buffers" of large corporations (Marouf & Moukadam, 2026).

Trade policy fragmentation and sanctions regimes create uncertainty that hinders businesses from making long-term investment decisions. Inconsistencies in trade standards, environmental regulations, and labor laws across countries create additional bureaucratic barriers. Companies seeking to diversify their supply chains must manage multiple layers of legal risks, which reduces flexibility and increases administrative costs (World Economic Forum, 2026).

The combination of these challenges demonstrates that reconfiguration is not simply a "where to produce" decision, but a complex strategic process that requires close coordination between governments, the private sector, and educational institutions. External pressures are forcing companies to be much more astute in assessing risks than was necessary in previous decades.

The purpose of this article was to analyze the impact of geopolitical uncertainty on the structural transformation of supply chains. The study provided convincing answers to the research questions, confirming that in the modern business environment, supply chain "resilience" has become a key strategic priority.

Analysis of research questions: The study confirmed that the answer to the main research question lies in replacing the "primacy of efficiency" with the "primacy of risk management". Companies no longer evaluate supply chains solely based on transaction costs, but rather make choices in favor of geographical proximity (nearshoring) and political trust (friendshoring). As for the supporting questions, the analysis showed that technological automation (Industry 4.0) is indeed playing a crucial role in the return of manufacturing capacity to high-cost countries, while ESG standards provide an additional incentive to reduce transportation distances. However, the study also clearly showed that infrastructure constraints and the shortage of qualified personnel remain major barriers, slowing down the reconfiguration processes.

Hypothesis evaluation:

- Main hypothesis (H1): confirmed. Data analysis confirms that there is a direct link between geopolitical instability and resilience-oriented reconfiguration. Companies are willing to pay an "insurance premium" (increase in initial operating costs) to avoid long-term systemic disruptions.
- Supporting hypothesis (H2): confirmed. Automation is a key technological mediator that reduces the importance of the labor cost factor and facilitates nearshoring.

- Auxiliary hypothesis (H3): Partially confirmed. The study showed that critical industries (e.g. electronics, defense) do indeed react faster to geopolitical risks than mass production of consumer goods, although the speed of reconfiguration depends not only on the sector, but also on the financial stability of the company.

The study revealed that supply chain reconfiguration is not just a reactive action, but a proactive strategy. The future belongs to those companies that achieve a harmonious synthesis of global integration and regionalization, which will establish a balance between costs and security.

Conclusion: The transformation of global supply chains that we are witnessing today is not a temporary reaction to current crises, but a profound structural change in the world economic order. The era of "efficiency-based globalization," where the main goal was to minimize production costs as much as possible, is giving way to "resilience-oriented regionalization." As this article has shown, geopolitical uncertainty has become a constant factor forcing businesses to abandon traditional, yet vulnerable, offshoring models and move to hybrid strategies of nearshoring and friendshoring.

Future supply chains will not be isolated or completely deglobalized. Instead, we expect "hybrid models" to dominate, where companies maintain global reach to source strategically important resources, but locate critical production cycles and final assembly close to consumer markets or in the territories of trusted political allies. This approach provides an optimal balance between economic efficiency and systemic sustainability.

For business leaders, the coming period requires a paradigm shift in decision-making:

1. Integrated risk assessment: Supply chain management must become an integral part of strategic planning, where political and geographical risks will be taken into account as much as financial indicators.
2. Technology investments: Automation and data analytics are not just a means of reducing costs, but also the basis for resilience. "Smart factories" make it possible to implement nearshoring at much lower financial costs.
3. Partnerships and collaboration: Regionalization requires close coordination with governments to create a favorable investment environment and eliminate infrastructure barriers.

Stability is now seen as a competitive advantage. Companies that are the first to diversify their supply chains and move to flexible hybrid models will be able not only to withstand global fluctuations, but also to strengthen their market positions. The future economic landscape will reward those who proactively manage risks and manage to effectively integrate technological innovations into geopolitical realities.

Supply chain reconfiguration is not the end, but the beginning of a new, more sustainable and intelligent economic evolution.

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Community Seed Banks as Catalysts for Sustainable Agribusiness Investment, Food Security, and Indigenous Economic Development: A Proposed International Collaboration Framework for the Blaan Ancestral Domains of Mindanao, Philippines

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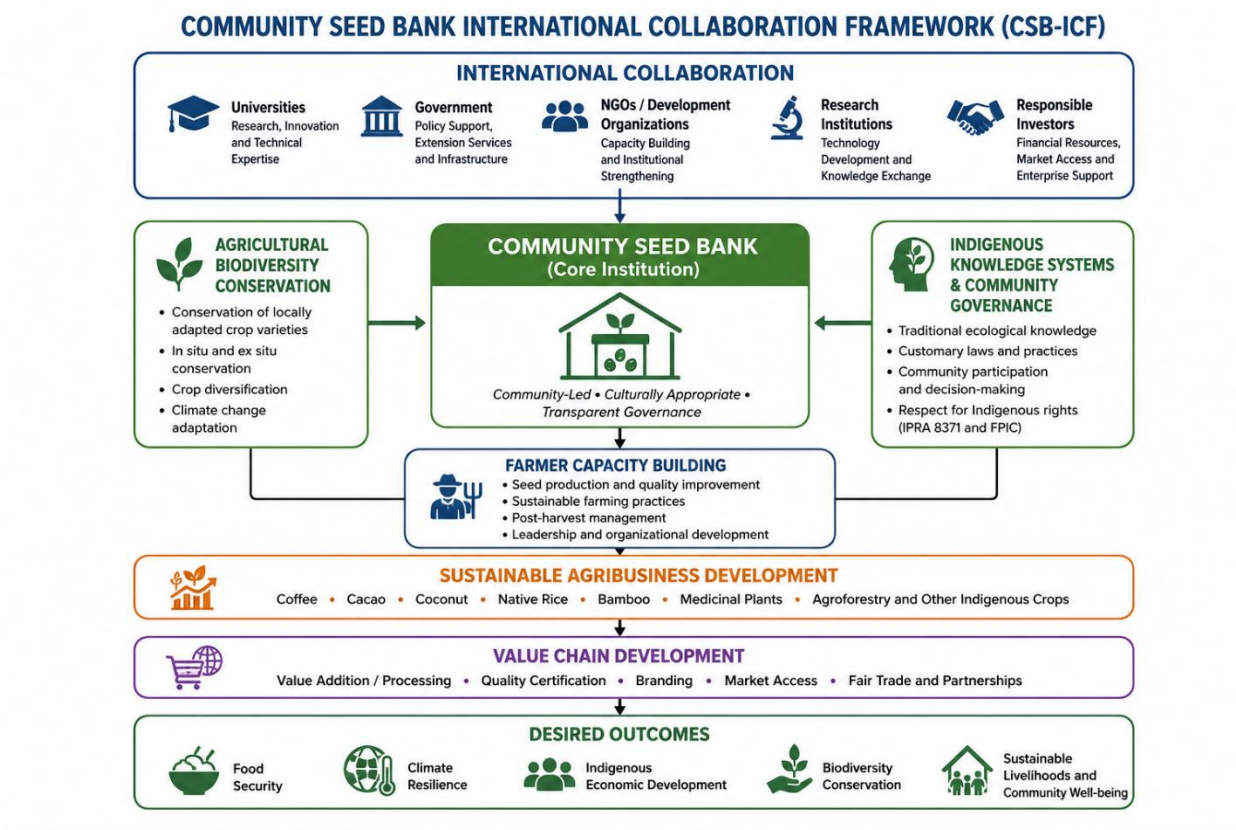
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Abstract

Community seed banks (CSBs) play an important role in conserving plant genetic resources and strengthening farmer-managed seed systems, yet their potential to support sustainable agribusiness and Indigenous economic development remains insufficiently explored in the Philippine context. This conceptual study proposes the Community Seed Bank International Collaboration Framework (CSB-ICF) for the Blaan Indigenous Cultural Community (ICC) of Mindanao. Using a qualitative conceptual research design, the study synthesizes peer-reviewed literature, government publications, policy documents, and reports from international organizations to identify key themes and research gaps related to community seed banks, agricultural biodiversity, Indigenous knowledge systems, food security, and sustainable agribusiness. Based on this synthesis, the CSB-ICF positions community seed banks as community-led institutions that integrate biodiversity conservation, Indigenous knowledge, sustainable agribusiness investment, food security, and multi-stakeholder collaboration. The framework emphasizes Indigenous leadership while promoting partnerships among government agencies, academic institutions, development organizations, and responsible private-sector stakeholders. By linking conservation with inclusive economic development, the proposed framework offers a conceptual foundation for future empirical research, policy formulation, and pilot implementation. It contributes to the growing literature on community-led agricultural development by demonstrating how community seed banks can serve as strategic platforms for strengthening resilient food systems, sustainable rural livelihoods, and Indigenous economic development.

Keywords: Community Seed Banks, Sustainable Agribusiness, Indigenous Economic Development, Blaan, Food Security, Agricultural Biodiversity, International Collaboration, Mindanao

Figure 1. Graphical Abstract



Note: *Graphical representation of the proposed Community Seed Bank International Collaboration Framework (CSB-ICF), illustrating the integration of community seed banks, Indigenous knowledge systems, agricultural biodiversity, sustainable agribusiness investment, food security, and international collaboration for community-led development within the Blaan ancestral domains of Mindanao.*

1. Introduction

Agriculture remains a cornerstone of the Philippine economy, contributing significantly to employment, rural livelihoods, and national food security. Mindanao, often referred to as the country's agricultural frontier, produces a substantial share of high-value crops such as coffee, cacao, coconut, banana, and corn. Despite its favorable agroecological conditions and abundant natural resources, many rural and Indigenous communities continue to face persistent challenges, including poverty, limited market access, climate variability, inadequate agricultural support services, and declining availability of locally adapted planting materials. These constraints reduce agricultural productivity, weaken local food systems, and limit opportunities for sustainable rural development.

Among the Indigenous Cultural Communities (ICCs) in southern Mindanao, the Blaan people maintain livelihoods closely connected to agriculture and natural resource management. Their traditional farming systems incorporate crop diversity, agroforestry, Indigenous seed selection, and ecological stewardship, contributing to household food security while conserving locally adapted crop varieties and traditional ecological knowledge. However, environmental degradation, changing land-use patterns, climate change, and increasing dependence on commercial seed systems threaten these agricultural practices and the conservation of valuable plant genetic resources. Strengthening community-based approaches to seed conservation has therefore become increasingly important for supporting biodiversity and community resilience.

Community seed banks have emerged as community-managed institutions that strengthen local seed systems through seed conservation, multiplication, exchange, and farmer participation. Previous studies have shown that community seed banks improve agricultural biodiversity, seed security, and climate resilience while encouraging knowledge sharing and community participation (Vernooy et al., 2015; Food and Agriculture Organization of the United Nations [FAO], 2022). In the Philippines, community-based seed initiatives have also improved farmers' access to quality planting materials and strengthened local agricultural institutions (PhilRice, 2021). These initiatives demonstrate that community seed banks can serve not only as conservation mechanisms but also as institutions supporting sustainable rural development.

At the same time, sustainable agribusiness has evolved beyond increasing agricultural production to include environmental sustainability, social inclusion, and responsible investment. For Indigenous communities, agricultural development should integrate biodiversity conservation, traditional knowledge, and community governance with opportunities for enterprise development and value addition. However, existing research has generally examined community seed banks, Indigenous agriculture, food security, and agribusiness as separate fields of study. Few studies have explored how these elements can be integrated into a single framework that supports Indigenous agricultural development.

To address this gap, this study proposes the Community Seed Bank International Collaboration Framework (CSB-ICF) for the Blaan Indigenous Cultural Community in Mindanao. Developed through a synthesis of existing literature, the framework positions community seed banks as community-led institutions that connect agricultural biodiversity conservation, Indigenous knowledge systems, sustainable agribusiness investment, food security, and international collaboration. As a conceptual framework, the CSB-ICF provides a foundation for future research, policy development, and pilot implementation that promotes community-led, culturally appropriate, and environmentally sustainable agricultural development.

2. Literature Review

Community seed banks (CSBs) have become important community-based institutions that strengthen local seed systems through the conservation, multiplication, exchange, and sustainable management of locally adapted crop varieties. Initially established to prevent the loss of traditional plant genetic resources, CSBs have evolved into multifunctional institutions that support agricultural biodiversity, seed security, climate resilience, and farmer participation. Unlike centralized seed distribution systems, community seed banks are locally governed, enabling farming communities to conserve traditional crop varieties while maintaining control over their agricultural resources (Vernooy et al., 2015; Vernooy, 2020). Their participatory approach strengthens local institutions, promotes knowledge sharing, and supports the long-term sustainability of community-managed seed systems.

Agricultural biodiversity is widely recognized as a foundation of resilient food systems because it provides the genetic diversity needed to adapt crops to changing environmental conditions. Climate change, land-use conversion, and the widespread adoption of genetically uniform commercial varieties have accelerated the loss of traditional crop diversity worldwide. The Food and Agriculture Organization (FAO, 2022) emphasizes that conserving locally adapted crop varieties enhances agricultural resilience, safeguards ecosystem services, and contributes to sustainable food production. Community seed banks directly support these objectives by conserving Indigenous seed varieties, encouraging crop diversification, and reducing dependence on external seed sources.

Beyond biodiversity conservation, community seed banks strengthen farmer-managed seed systems through knowledge exchange, capacity building, and participatory governance. Farmer involvement in seed selection, storage, and distribution improves access to quality planting materials while reinforcing local institutions and social networks (PhilRice, 2021). These community-led practices also preserve traditional ecological knowledge and enhance farmers' capacity to adapt agricultural practices to environmental change, contributing to both community resilience and institutional development.

Within the Philippine context, Indigenous Cultural Communities possess extensive agricultural knowledge developed through generations of interaction with their environments. Among these communities, the Blaan of southern Mindanao practice diversified farming systems that integrate mixed cropping, agroforestry, Indigenous seed selection, and customary resource management. These practices contribute to biodiversity conservation, soil fertility, household food security, and cultural preservation while providing valuable insights into sustainable and culturally appropriate agricultural development (Benito, 2020; Franca & Lumogdang, 2022).

The protection of Indigenous knowledge and traditional agricultural practices is reinforced by international and national legal frameworks. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) recognizes Indigenous Peoples' rights to maintain their cultural heritage, traditional knowledge, and natural resources (United Nations, 2007). Similarly, the Indigenous Peoples' Rights Act of 1997 (Republic Act No. 8371) affirms rights to ancestral domains, self-governance, cultural integrity, and Free, Prior and Informed Consent (FPIC) (Republic Act No. 8371, 1997). These frameworks emphasize that development initiatives should respect Indigenous governance and ensure meaningful community participation.

Sustainable agribusiness has evolved beyond increasing agricultural production to encompass environmental sustainability, social inclusion, and responsible investment. In Mindanao, national development strategies identify coffee, cacao, coconut, and other high-value commodities as priority sectors for rural economic growth (Department of Agriculture, 2017a, 2017b; Briones et al., 2023). However, many Indigenous communities continue to face barriers to finance, technology, extension services, and market access, limiting their participation in agricultural value chains. Addressing these challenges requires development approaches that integrate Indigenous knowledge, biodiversity conservation, and community participation with institutional support and responsible investment.

Food security depends on resilient agricultural systems supported by effective collaboration among Indigenous communities, universities, government agencies, research institutions, development organizations, and responsible private-sector partners. Community seed banks contribute by ensuring continuous access to locally adapted planting materials, promoting crop diversity, and reducing vulnerability to climate-related and socioeconomic disruptions (FAO et al., 2021). Collaborative partnerships further strengthen community seed systems through research, technical assistance, capacity building, market access, and knowledge exchange while ensuring that Indigenous communities retain leadership, cultural integrity, and decision-making authority.

Although previous studies have examined community seed banks, agricultural biodiversity, Indigenous knowledge, food security, and agribusiness development, these themes have generally been investigated independently. Limited research has explored how community seed banks can simultaneously function as institutions for biodiversity conservation, Indigenous knowledge preservation, sustainable agribusiness, and collaborative governance. This gap is particularly evident within the Blaan Indigenous Cultural Community of Mindanao and provides the conceptual foundation for the proposed Community Seed Bank International Collaboration Framework (CSB-ICF).

3. Methodology

This study employed a qualitative conceptual research design based on the review and synthesis of published literature. As a conceptual study, no primary data were collected. Instead, the study synthesized peer-reviewed journal articles, government publications, policy documents, and reports from recognized national and international organizations to develop the proposed Community Seed Bank International Collaboration Framework (CSB-ICF).

The literature review focused on five major themes: community seed banks, agricultural biodiversity, Indigenous knowledge systems, sustainable agribusiness, and food security, with priority given to studies relevant to the Philippine context, particularly Mindanao and Indigenous communities.

A thematic analysis was conducted to identify recurring concepts, relationships, and research gaps across the selected literature. The synthesis of these themes informed the development of the CSB-ICF, which integrates agricultural biodiversity conservation, Indigenous knowledge systems, sustainable agribusiness investment, food security, and international collaboration into a unified conceptual framework for the Blaan Indigenous Cultural Community (ICC).

As a conceptual framework, the CSB-ICF is intended to guide future empirical research, policy formulation, and pilot implementation. It is not presented as an empirically validated model but as a theoretical foundation for community-led, culturally appropriate, and environmentally sustainable agricultural development.

4. Results and Discussion

4.1 Synthesis of the Literature

The literature consistently identifies community seed banks (CSBs) as effective community-based institutions for conserving plant genetic resources, strengthening local seed systems, and improving farmers' access to quality planting materials (Vernooy et al., 2015; FAO, 2022). Previous studies also agree that CSBs enhance agricultural biodiversity, climate

resilience, farmer participation, and the preservation of traditional ecological knowledge through locally managed seed conservation and exchange. Research conducted in the Philippines further demonstrates that community-managed seed systems strengthen local institutions while supporting food security and sustainable agricultural production (PhilRice, 2021).

Although these contributions are well documented, the literature largely examines community seed banks, Indigenous knowledge, agribusiness development, food security, and agricultural biodiversity as separate areas of research. Few studies have explored how these components can be integrated within a single institutional framework for Indigenous agricultural development. This gap is particularly evident in the context of the Blaan Indigenous Cultural Community, where limited research has examined community seed banks as platforms that simultaneously support biodiversity conservation, community governance, sustainable agribusiness investment, and collaborative partnerships. Addressing this gap provides the foundation for the conceptual framework proposed in this study.

4.2 Proposed Community Seed Bank International Collaboration Framework (CSB-ICF)

Figure 1 presents the proposed Community Seed Bank International Collaboration Framework (CSB-ICF). The framework positions the community seed bank as the central institution connecting five interrelated components: agricultural biodiversity conservation, Indigenous knowledge systems, sustainable agribusiness investment, food security, and international collaboration.

Agricultural biodiversity conservation focuses on preserving locally adapted crop varieties and maintaining plant genetic resources that enhance resilience to environmental change. Indigenous knowledge systems recognize the Blaan community's traditional farming practices, ecological knowledge, and customary governance as essential foundations for sustainable agricultural development. Sustainable agribusiness investment emphasizes responsible value-chain development, market participation, and livelihood diversification while respecting Indigenous rights and environmental sustainability. Food security represents the long-term outcome of strengthened local seed systems through improved access to diverse and resilient planting materials. International collaboration links Indigenous communities with universities, government agencies, research institutions, development organizations, and responsible private-sector partners to facilitate knowledge exchange, technical support, and responsible investment.

Unlike conventional development models that rely primarily on external interventions, the CSB-ICF places the Indigenous community at the center of decision-making. External stakeholders serve as partners that strengthen local capacity while respecting community governance, cultural integrity, and the principle of Free, Prior and Informed Consent (FPIC).

4.3 Implications

The proposed Community Seed Bank International Collaboration Framework (CSB-ICF) has important theoretical, policy, and practical implications for sustainable agricultural development. From a theoretical perspective, the framework contributes to the literature by integrating concepts that have largely been examined independently, including community seed banks, agricultural biodiversity, Indigenous knowledge systems, sustainable agribusiness, food security, and multi-stakeholder collaboration. Previous studies have primarily focused on the conservation functions of community seed banks or on individual aspects of Indigenous agriculture. The CSB-ICF extends this body of knowledge by positioning community seed banks as institutional platforms that simultaneously support biodiversity conservation, community governance, and sustainable economic development. This integrated perspective provides a conceptual foundation for future interdisciplinary research on Indigenous agricultural systems.

From a policy perspective, the framework supports national and international priorities related to Indigenous rights, sustainable agriculture, and climate resilience. In the Philippine context, the CSB-ICF is consistent with the objectives of the Indigenous Peoples' Rights Act of 1997 (Republic Act No. 8371) by recognizing Indigenous communities as primary decision-makers in agricultural development while emphasizing respect for traditional knowledge and the principle of Free, Prior and Informed Consent (FPIC). The framework also aligns with government efforts to strengthen climate-resilient agriculture, conserve agricultural biodiversity, and promote inclusive rural development through community-based and participatory approaches.

Beyond the Philippine context, the CSB-ICF has broader international relevance. Many Indigenous and rural communities worldwide face similar challenges, including biodiversity loss, climate change, limited access to quality seed systems, and unequal participation in agricultural markets. Although developed for the Blaan Indigenous Cultural Community of Mindanao, the

framework provides a flexible conceptual model that may be adapted to other Indigenous agricultural contexts while respecting local governance structures, cultural practices, and environmental conditions. Future empirical studies may evaluate its applicability across different regions and examine its contribution to resilient food systems, sustainable agribusiness, and community-led rural development.

Future empirical research may evaluate the effectiveness of the Community Seed Bank International Collaboration Framework (CSB-ICF) using measurable social, economic, environmental, and institutional indicators. These may include the number of locally adapted crop varieties conserved, improvements in household food security, farmer participation in community seed systems, establishment of value-added agribusiness enterprises, and the development of collaborative partnerships among Indigenous communities, government agencies, academic institutions, and development organizations. Assessing these indicators would provide evidence of the framework's effectiveness and support its refinement and adaptation in other Indigenous agricultural communities.

4.4 Recommendations

The proposed framework should be further evaluated through pilot implementation and empirical validation within Indigenous communities. Future initiatives should promote collaboration among Indigenous organizations, government agencies, universities, development institutions, and responsible private-sector partners to strengthen local seed systems, conserve agricultural biodiversity, and expand sustainable agribusiness opportunities. Additional research is recommended to assess the framework's effectiveness across different Indigenous communities and agricultural contexts, enabling refinement and broader application in support of resilient and inclusive rural development.

5. Conclusion

This study proposed the **Community Seed Bank International Collaboration Framework (CSB-ICF)** as a conceptual model for strengthening sustainable agribusiness, food security, and Indigenous economic development within the Blaan Indigenous Cultural Community (ICC) of Mindanao. Drawing on a synthesis of existing literature, the framework positions community

seed banks as community-led institutions that integrate agricultural biodiversity conservation, Indigenous knowledge systems, sustainable agribusiness investment, food security, and multi-stakeholder collaboration.

The review demonstrates that community seed banks extend beyond their traditional role in seed conservation by supporting climate resilience, preserving traditional ecological knowledge, strengthening local governance, and creating opportunities for sustainable rural enterprises. However, existing studies have generally examined these themes independently. The CSB-ICF addresses this gap by providing an integrated conceptual framework that links conservation with inclusive economic development while recognizing Indigenous communities as active partners in agricultural development.

Although the framework has not been empirically validated, it offers a theoretical foundation for future research, policy formulation, and pilot implementation. Its emphasis on community leadership, collaborative governance, and responsible investment aligns with broader goals of sustainable agriculture and Indigenous rights.

Future studies should empirically validate the proposed CSB-ICF through pilot implementation in Indigenous communities. Collaborative partnerships among government agencies, universities, development organizations, Indigenous organizations, and responsible private-sector partners are encouraged to strengthen community seed systems, conserve agricultural biodiversity, and promote sustainable agribusiness that respects Indigenous knowledge, governance, and cultural heritage.

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The Impact of Public General Education Funding Models on Educational Quality and Its Transformation in the Higher Education System (Prospects for Public-Private Programmatic Integration): The Case of Georgia

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Abstract: Funding models for public general (school) and higher education directly determine the quality, accessibility, and sustainability of the education system. In the case of Georgia, this issue is particularly relevant, as the country continuously seeks an optimal balance between state subsidization and market regulation.

Accordingly, this paper analyzes the effectiveness of existing funding models for public general education institutions in Georgia and their direct impact on the quality of education. The article examines the structural limits of the current voucher system and proposes various alternative funding pathways to enhance educational quality.

Keywords: Educational Funding, Hybrid Funding, Quality of Education.

Introduction: The relevance of the given issue is driven by the circumstance that today, in the 21st century, the issues of educational institutions, directly the development of education, and its funding forms constitute an integral part of Georgia's competitive economic formation strategy.

Both general and higher education represent one of the priorities of the state's economic and budgetary policy, as evidenced by the common consensus established among experts regarding the role of education in the country's socio-economic development.

Ensuring the accessibility of education and improving its quality represent an important direction of the education reform, while the financial support for implementing the priority goals of higher education development reinforces the fundamental opinion of experts regarding this matter.

The necessity of reform is evidenced by the TIMSS 2023 report published by LEPL National Center for Educational Research — Georgia on the Global Educational Map. TIMSS research reports concern mathematics and natural sciences. In the 2023 report, we read that the transition process of students from the primary to the basic educational stage is not managed with sufficient efficiency. Evidence of this is: the tendency of student achievement to decline from the fourth grade to the eighth grade in both mathematics and natural sciences, and the pronounced trend of stagnation in eighth-grade results (in terms of achievement improvement); the circumstance given in the research is explained by the fact that students transition to a new stage and a new academic environment without appropriate readiness, sufficient subject-specific and methodological support, which hinders their continuous and consistent academic development. [1, p. 46]

If we look at PISA reports, despite the fact that according to general statistics the private sector outperforms the public sector, specifically between strong public schools in Tbilisi and medium/low-fee private schools, the picture is often the reverse: in strong public schools in Tbilisi (e.g., Vakhushti Bagrationi Public School [Note: spelling adjusted based on common Georgian school names matching 'ვაკუას' typo], Komarov Public School, School Mziuri, etc.), the academic level, particularly in the STEAM (mathematics/natural sciences) direction, significantly exceeds the indicators of low-fee private schools.

The TIMSS and PISA studies highlight that students in Tbilisi's leading public schools often even exceed the international average threshold (500 points), whereas the country's overall average indicator is low. Also important is the fact and circumstance that, according to the results of the Unified National Examinations and Olympiads, these schools annually stand out with stable leadership.

It is important to consider the situation in relatively lower-cost schools (schools with an average annual fee ranging from 5,000 to 12,000 GEL). Research in this segment shows that the

academic level of private schools is average. They struggle to compete with strong public schools in deep subject knowledge (especially in mathematics and natural sciences), because retaining highly qualified teachers on such a budget is difficult.

Then the question arises: if a public school strong in academic knowledge still competes with a private school, why do the majority of society shift to private schools within the aforementioned price range? Private schools are preferred due to circumstances such as smaller class sizes—while public schools have 28 to 35 students per class, which is stressful for many children—and an extended-day regime (after-school programs), where private schools often offer parents the option to keep the child at school (lunch, homework preparation), which is decisive for employed parents. Consequently, based on these very circumstances, private general educational institutions are prioritized.

To take effective steps toward improving the accessibility and quality of education, the analysis of TIMSS 2007–2023 data serves as a critically important resource—it clearly shows where we have made progress and where we face systemic barriers that hinder the achievement of equality in education. [2, p. 38]

In order for Georgia to improve its positions on the global map, it is essential that the amount and structure of the voucher are revised; funding should not be purely 'per capita,' and needs-based components must definitely be added (e.g., STEM support, special needs, regional index). Creating healthy competition, along with an increased and flexible voucher, will enable both public general educational institutions (reducing class sizes and increasing resources) and mid-segment private schools to focus not simply on 'childcare' [supervision], but on high academic knowledge and competitiveness.

All of the above clearly demonstrates that, from the perspective of financial management, raising the level of teaching requires a transition from 'resource-based (input-based) funding' to 'output/outcome and needs-based funding.' A mechanical increase in the budget alone is not sufficient. It is essential to differentiate the funding formula, increase the financial autonomy of general educational institutions, and create a robust monitoring system that ensures financial resources are directly reflected in students' academic achievements.

Public schools already possess the most essential resource—a strong and experienced teaching staff. For this potential to operate at full capacity, they need an appropriate environment: flexible infrastructure, a schedule tailored to age characteristics at the elementary level, small

classes, and after-school development programs. By integrating these components, the public school will become not merely a free alternative, but the primary choice that creates a high academic standard and a healthy environment.

The infrastructural transformation of public schools, reduction of class sizes, introduction of teacher assistants, and the creation of an extended-day model are associated with colossal funding. However, through the optimal redistribution of the existing budget and international resources, the implementation of these changes is entirely realistic.

To achieve this, several key financial mechanisms need to be activated: budget allocation should be based not only on student headcount, but also on school specifics (e.g., the proportion of socially vulnerable students, inclusive needs, regional location). Schools that demonstrate progress (e.g., increased student engagement, reduced dropout rates) should be granted additional discretionary budgets to fund internal infrastructure and extracurricular activities.

The state budget will find it difficult to equip all schools simultaneously, which is why the involvement of private business is crucial. For example, public general educational institutions can be provided with infrastructure through the basis of the following types of incentives, specifically:

Tax incentives for business: Companies that finance STEM laboratories, sports infrastructure, or technological parks of specific public schools should be granted tax incentives (e.g., corporate income tax deduction/reduction in the amount of the funds invested in education);

Schools must have the right and capability to participate independently in small international grant competitions for local-level infrastructure projects.

Since general educational institutions fail to provide in-depth knowledge (which is clearly highlighted in TIMSS studies), higher education institutions are consequently forced to re-teach basic skills to first-year students.

When a general educational institution fails to provide fundamental knowledge, and a university cannot fully compensate for this deficit within 3–4 years, a graduate enters the market who holds a diploma yet possesses low competitiveness.

Higher education reform cannot be successful unless the funding and teaching quality of general educational institutions are regulated. Ultimately, the meager funding of general

educational institutions is reflected in the low academic productivity of higher educational institutions and structural imbalances in the labor market.

The aim of the research is a systemic analysis of existing funding models (voucher-based and targeted) of public general educational institutions in relation to the quality of services received, and to determine how schools' financial and programmatic challenges are reflected in the level of preparation and knowledge of students at the higher education stage. Furthermore, the goal of the scientific paper is to develop models for enhancing continuity and efficiency across educational stages based on the programmatic and structural integration of private and public schools.

The research tasks are:

- Studying economic and financial aspects—which implies analyzing the current state mechanisms for funding public schools (including basic and differentiated vouchers, targeted programs) and evaluating their structural compatibility with the real needs of schools;
- Establishing the link between costs and outcomes—conducting a correlational analysis between the volume of state funding for general educational institutions and the quality of educational services received (infrastructure, material and technical base, curriculum diversity) through a comparative analysis between public and private general educational institutions;
- Assessing the impact of funding on academic achievements using the examples of public and private general educational institutions—determining, based on international assessment data (PISA, TIMSS, PIRLS) and national exams, the extent to which budgetary resources are transformed into students' actual knowledge and academic progress;
- Comparative analysis (public vs. private sector)—comparing the efficiency of financial management and the delivery practices of educational services between public and private general educational institutions in order to identify successful models existing in the private sector;
- Designing an integrative model, specifically: developing financial and legal mechanisms for the funding and implementation of joint educational programs between the public and private sectors.

The given structure provides the research with a clear and logical line, specifically — state expenditures - school services - student knowledge - evaluation of private sector quality in relation to the public sector.

Materials and Methods of the Conducted Research. The research of the given paper is based on a mixed-methods research methodology, an approach that allows the trends identified through statistical analysis of quantitative data to be explained in-depth through the interpretation of qualitative data.

"The purpose of the quantitative research method is to establish correlational and regression relationships between general educational institution funding models (voucher-based, targeted, basic) and students' academic achievement/qualitative indicators. As for the qualitative research method, its purpose is to study in-depth the transformation of students in higher education institutions (HEIs), the perspectives of public and private programmatic integration, and existing challenges based on expert evaluations.

The empirical base of the research consists of both secondary data (existing studies, official statistics, and documentation) and primary data (collected from the research subjects).

From the secondary data, the paper utilizes the legislative and normative framework, the laws of Georgia 'On Higher Education' and 'On General Education', strategic documents, and orders of the Ministry of Education, Science and Youth of Georgia.

Official statistical data were taken from the National Statistics Office of Georgia regarding education funding, data from the National Assessment and Examinations Center—results of the Unified National Exams (broken down by school types and funding models), as well as statistical data obtained from international research results (PISA, TIMSS, PIRLS) concerning Georgia.

Results of the research and their discussion. Based on the conducted research, it was revealed that the existing voucher-based funding methodology has a unified character and takes little account of school infrastructure depreciation, modern technological needs, and the costs of updating the material and technical base. As a result, funding is focused on 'survival/functioning' rather than 'development/quality improvement.

Quantitative and correlational analysis showed a weak to moderate positive correlation between the total volume of funding for public general educational institutions and students' academic achievement (e.g., national exam assessments, PISA results). All of this is proof that an increase in financial resources does not automatically transform into an increase in academic

quality, unless, of course, it is directed toward internal mechanisms of efficiency (the introduction of modern teaching methodologies).

Within the framework of the research, the strengths of public and private general educational institutions were revealed. The strengths of public general educational institutions turned out to be the teachers' academic, fundamental subject knowledge and compliance with state standards (especially among leading and mentor teachers), while in the case of private ones (in medium-priced general educational institutions), it is the mastery of modern methodologies, interactive teaching, and a high level of knowledge in foreign languages and digital technologies.

"Within the framework of the conducted research, it was established that the funding models existing in both the public and private sectors of Georgia's general educational institutions directly determine the quality of education received, creating a so-called chain effect that is ultimately reflected at the higher education level—specifically in students' academic readiness. The current voucher system, where 'money follows the student,' structurally places schools in unequal conditions: large general educational institutions in densely populated urban centers manage to achieve financial stability, while regional and low-enrollment schools experience a constant budget deficit, which the existing fragmented mechanisms of targeted funding fail to eliminate. These financial-programmatic constraints negatively affect the environment of general educational institutions, which is manifested in the absence of modern technologies and laboratories.

As a result, the gaps left by general educational institutions directly transfer to the higher education level. Since, precisely due to scarce financial resources, general educational institutions cannot provide competitive knowledge, achieving success in the national exams largely depends on the institution of private tutors, which profoundly deepens socio-economic inequality.

First-year students enter universities with a deficit of fundamental transferable skills such as critical and analytical thinking, academic writing, independent research, and practical STEM competencies. This situation forces higher education institutions to direct their academic and financial resources not toward high-level scientific-research activities, but toward overcoming students' school failures and basic academic shortcomings, which makes the funding model of general educational institutions one of the main challenges to the country's human capital development.

Conclusion: When the school budget depends entirely on student per-capita enrollment, the funding system becomes oriented not toward improving the quality of teaching, but toward maintaining quantity and covering basic infrastructural expenses. As a result, we get social and academic inequality, where the quality of education is determined not by the uniformity of state standards, but by the school's geographical location and its student capacity.

For a substantial increase in quality, the first fundamental step is precisely the transformation of the funding architecture. A school must receive not only a basic voucher per student, but also needs-based and targeted additional funding. This implies specific support for inclusive environments, high-mountain, and regional schools, as well as the encouragement of educational institutions that demonstrate a clear dynamic of academic improvement or innovative projects. The financial mechanism must be transformed from a survival tool into a motivator for development.

Ultimately, achieving a high quality of knowledge in general educational schools requires a complex approach, where voucher-based funding is no longer viewed as the sole and decisive lever. A flexible and fair funding model, the professional empowerment of teachers, the substantive autonomy of schools, and a modern learning environment create a unified ecosystem where every student, regardless of their place of residence or social status, is given a real opportunity to receive competitive education corresponding to the challenges of the 21st century.

Ultimately, the transformation of the funding model and cross-sectoral integration represent the main prerequisite not only for the survival of the school, but also for the quality of higher education and the country's human capital.

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Title: Transformational Leadership in the Georgian Public Sector: A Conceptual Approach to Managing Multigenerational Workforces

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Abstract

Public organizations increasingly manage workforces composed of multiple generations, each bringing different expectations about work, leadership, learning, and career development. In the Georgian public sector, this diversity presents a significant leadership challenge rather than merely a human resource issue.

This paper examines whether transformational leadership can provide an effective conceptual approach to managing multigenerational workforces in Georgia. Drawing on leadership theory, generational research, and public administration literature, it develops a conceptual framework tailored to the country's ongoing public sector reforms.

The framework argues that transformational leadership, through its four behavioural dimensions, can create organizational conditions in which generational diversity becomes a source of collaboration and innovation rather than conflict. Rather than presenting empirical findings, the paper offers a theoretical foundation for future research and leadership development within Georgian public institutions.

Keywords: Transformational Leadership; Public Sector Leadership; Public Administration; Generational Diversity; Generation X; Generation Y; Generation Z; Human Resource Management; Georgia

Introduction

Managing a multigenerational workforce is not a new phenomenon, but demographic change has made generational diversity more visible than ever. Today, employees from different generations work side by side while holding distinct expectations regarding leadership, communication, technology, and career development.

For public sector organizations, this diversity coincides with broader administrative reforms emphasizing transparency, innovation, citizen-centred governance, and digital transformation. Consequently, public managers are expected not only to supervise employees but also to motivate, develop, and lead increasingly diverse teams through organizational change.

Georgia provides a particularly relevant context for examining these challenges. Over the past two decades, extensive public administration reforms have modernized civil service institutions while creating workplaces where experienced civil servants collaborate with younger employees possessing different technological skills, educational backgrounds, and professional expectations (Government of Georgia, 2023; SIGMA Programme, 2023; World Bank, 2022). This raises important questions about whether existing leadership approaches are adequate for managing such diversity.

Among contemporary leadership theories, transformational leadership appears especially relevant. Its emphasis on vision, motivation, intellectual stimulation, and individualized consideration suggests a leadership approach capable of bridging generational differences while supporting organizational change.

Despite its extensive application in leadership research, transformational leadership has received limited conceptual attention in relation to multigenerational public organizations in Georgia. This paper addresses that gap by proposing a conceptual framework that integrates leadership theory, generational diversity, and public administration scholarship. Rather than presenting empirical evidence, it provides a theoretical foundation for future research and practical guidance for leadership development within Georgian public institutions.

The Evolution of Leadership Theories

Leadership has evolved considerably over the past century, reflecting changing understandings of organizations, human behaviour, and management. Early leadership theories focused primarily on individual characteristics, while later approaches increasingly emphasized behaviours, context, and leader-follower relationships.

The earliest perspectives, including the Great Man Theory, viewed leadership as an innate quality possessed by exceptional individuals. Trait theory later attempted to identify the personal characteristics associated with effective leaders, such as intelligence, confidence, and integrity. However, research demonstrated that no universal combination of traits could consistently explain leadership effectiveness across different organizational contexts (Northouse, 2022).

The behavioural approach, particularly the Ohio State and Michigan studies, shifted attention from who leaders are to what they do, highlighting task-oriented and relationship-oriented behaviours. This marked

an important transition by suggesting that leadership behaviours can be learned and developed. Subsequently, contingency and situational theories argued that effective leadership depends on contextual factors, requiring leaders to adapt their style according to followers, tasks, and organizational conditions.

The most influential development in contemporary leadership research is the distinction between transactional and transformational leadership, introduced by Burns (1978) and further developed by Bass (1985). While transactional leadership is based on exchanges between leaders and followers, transformational leadership seeks to inspire followers through a shared vision, intrinsic motivation, intellectual stimulation, and individualized consideration. Bass operationalized these principles into four behavioural dimensions - idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration - which have become central to leadership research.

Extensive empirical evidence supports the effectiveness of transformational leadership across both public and private organizations. Meta-analytic studies, including Judge and Piccolo (2004), consistently demonstrate positive relationships between transformational leadership and employee motivation, organizational commitment, innovation, and performance. Given this strong theoretical and empirical foundation, transformational leadership provides the conceptual basis for the framework developed in this paper.

Generational Theory and Workplace Diversity

The concept of generations has long been used in sociology and organizational research to explain how shared historical experiences shape individuals' values and workplace expectations. Mannheim (1952) argued that people who come of age during the same historical period often develop similar perspectives, although he emphasized that generations should not be viewed as homogeneous groups.

Organizational research commonly distinguishes between **Baby Boomers (1946-1964), Generation X (1965-1980), Generation Y or Millennials (1981-1996), and Generation Z (1997 onwards)** (Strauss & Howe, 1991, 1997; Twenge, 2017, 2023). These cohorts have been associated with differences in work values, communication styles, leadership expectations, and career preferences (Smola & Sutton, 2002; Parry & Urwin, 2011).

However, generational theory has also faced important criticism. Researchers argue that workplace attitudes are influenced not only by birth cohort but also by career stage, organizational culture, and individual differences (Costanza et al., 2012; Rudolph et al., 2021). Consequently, generational categories should be understood as broad analytical patterns rather than fixed stereotypes.

Despite these limitations, evidence suggests that meaningful cohort-based differences remain relevant for organizational practice (Lyons & Kuron, 2014). In the context of the Georgian public sector, Generation X employees often contribute institutional knowledge and administrative experience, Millennials tend to value collaboration, feedback, and purpose-driven work, while Generation Z brings strong digital competencies and adaptability (Twenge, 2017; CIPD, 2023; SHRM, 2022).

Managing these differences requires leadership approaches that balance diversity with shared organizational goals. Rather than treating generational diversity as a challenge to overcome, organizations can leverage it as a source of learning, innovation, and collaboration through effective leadership.

Transformational Leadership in the Public Sector

Transformational leadership has attracted growing attention in public administration research. Although early studies questioned whether a leadership model developed largely in the private sector could be effectively applied to public organizations, subsequent evidence has largely supported its relevance (Denhardt & Denhardt, 2015; Pollitt & Bouckaert, 2017).

Research consistently demonstrates that transformational leadership is associated with higher levels of employee motivation, organizational commitment, public service motivation, and readiness for organizational change (Northouse, 2022; OECD, 2021). By emphasizing vision, shared values, and intrinsic motivation, this leadership approach aligns well with the mission-driven nature of public organizations.

Within the context of public administration reforms, transformational leadership is particularly valuable in supporting organizational change. As governments implement new technologies, redesign administrative processes, and adopt more performance-oriented management systems, leaders play a crucial role in maintaining employee engagement, building trust, and encouraging innovation (Osborne & Gaebler, 1992; Osborne, 2010).

Digital transformation further reinforces the importance of leadership. Rather than being solely a technological process, digital transformation requires cultural and organizational change that depends on leaders' ability to foster adaptability, continuous learning, and collaboration (Mergel et al., 2019; Vial, 2019). As Westerman et al. (2014) argue, technology alone does not transform organizations; successful transformation depends on leadership that enables employees to embrace change.

These challenges are particularly relevant in Georgia, where ongoing public administration reforms have prioritized digital government, merit-based civil service, and improved public service delivery (SIGMA

Programme, 2023; World Bank, 2022). In this context, transformational leadership offers a promising approach for managing organizational change while supporting an increasingly diverse workforce.

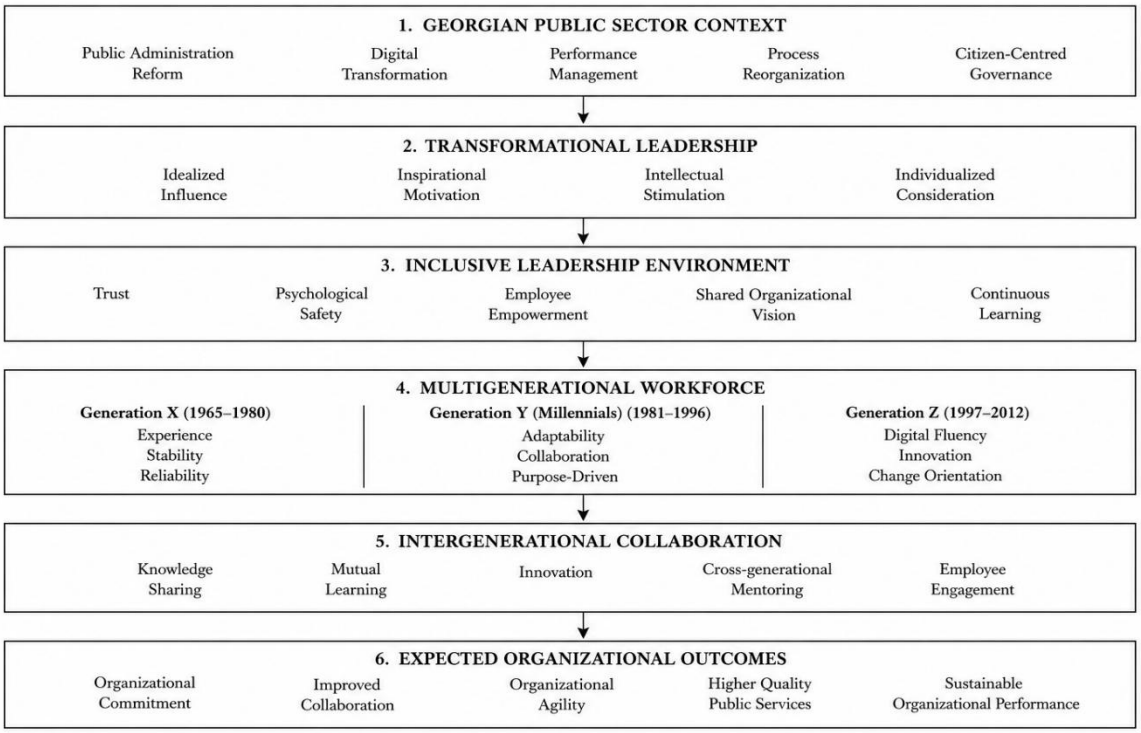
Conceptual Framework: Framework Rationale and Assumptions

The literature highlights a clear gap: although transformational leadership and generational diversity have been widely studied, their interaction within the Georgian public sector has received limited conceptual attention. To address this gap, this paper proposes a framework explaining how transformational leadership may enhance collaboration and organizational performance in multigenerational public organizations.

The framework is based on three assumptions. First, Georgian public institutions increasingly employ Generation X, Millennials (Generation Y), and Generation Z employees, whose differing experiences, communication preferences, and career expectations create both management challenges and opportunities. Second, transformational leadership provides an appropriate approach for managing this diversity through its four behavioural dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Third, leadership effectiveness is shaped by the broader institutional context, particularly ongoing digital transformation, performance management reforms, and administrative process reorganization.

The Proposed Framework

Figure 1. Conceptual Framework: Transformational Leadership for Managing Multigenerational Workforces in the Georgian Public Sector



Framework Explanation

The framework proposes that transformational leadership influences organizational outcomes indirectly by creating an environment characterized by trust, psychological safety, empowerment, and a shared sense of purpose. These conditions encourage knowledge sharing, cross-generational collaboration, and employee engagement.

Each dimension of transformational leadership contributes to this process. **Idealized influence** strengthens trust and credibility across generations; **inspirational motivation** unites employees around a common organizational vision; **intellectual stimulation** encourages innovation, learning, and openness to change; and **individualized consideration** recognizes employees' different developmental needs and career expectations.

Within such an environment, generational diversity becomes an organizational resource rather than a source of conflict. Experienced employees contribute institutional knowledge, while younger generations bring digital skills and new perspectives, promoting organizational learning and adaptability.

The framework further suggests that these collaborative processes support key public sector reforms, including digital transformation, performance management, and process modernization. Consequently,

transformational leadership is expected to contribute to higher employee engagement, stronger organizational commitment, improved collaboration, greater adaptability, and ultimately more effective public service delivery.

As this is a conceptual paper, these relationships are presented as theoretical propositions that require future empirical testing within the Georgian public sector.

Discussion

The framework proposed in this paper integrates leadership theory, generational research, and public administration into a single conceptual model tailored to the Georgian public sector. While these theoretical perspectives have been extensively studied, their combined application to post-Soviet public administration remains limited. Consequently, the framework should be understood as a context-sensitive conceptual proposition rather than a universally applicable model.

The findings suggest that traditional hierarchical leadership may be insufficient for contemporary public organizations facing digital transformation, performance-oriented reforms, and increasing organizational complexity. In contrast, transformational leadership provides a more suitable approach by promoting trust, collaboration, innovation, and employee engagement during periods of change.

The framework also reframes generational diversity as a potential organizational asset rather than merely a management challenge. Although differences in values, communication styles, and work expectations may create tensions, transformational leadership can foster an environment in which knowledge sharing, collaboration, and mutual learning outweigh potential conflicts. In this sense, leadership quality is proposed as a key mediating factor between generational diversity and organizational effectiveness.

An important practical implication concerns reverse mentoring, where younger employees contribute digital competencies and innovative perspectives while experienced civil servants share institutional knowledge and administrative expertise. Transformational leaders are well positioned to facilitate these reciprocal learning processes by encouraging openness, trust, and continuous learning.

For the Georgian public sector, the framework highlights the need to view leadership development as a strategic investment rather than a routine training activity. Competencies such as vision-building, trust, intellectual stimulation, and individualized support should become central components of leadership development programmes if public institutions are to manage generational diversity effectively while advancing ongoing administrative and digital reforms.

Implications for the Georgian Public Sector

The proposed framework has implications for public managers, human resource management, and leadership development within the Georgian public sector.

At the leadership level, the findings suggest that Georgian public managers require competencies beyond traditional administrative supervision. Skills such as articulating a shared vision, building trust across generations, encouraging innovation, and providing individualized support should become core components of leadership development programmes and competency frameworks (Civil Service Bureau of Georgia, 2023; Government of Georgia, 2023).

For human resource management, the framework highlights the importance of **generational responsiveness**. Rather than relying on generational stereotypes, organizations should recognize that employees at different career stages may have diverse expectations regarding feedback, professional development, workplace flexibility, and career progression. Performance management systems should therefore adopt more flexible and inclusive approaches to employee engagement.

The framework also emphasizes the importance of organizational learning. Knowledge sharing should be encouraged in multiple directions, combining the institutional experience of senior employees with the digital competencies and fresh perspectives of younger generations. Mentoring, reverse mentoring, and cross-generational project teams can strengthen organizational learning when supported by a culture of trust and collaboration.

Finally, successful digital transformation and public administration reform require leadership development alongside technological investment. Transformational leadership can foster employee engagement, reduce resistance to change, and create the organizational conditions necessary for continuous learning and sustainable reform. Consequently, leadership development should be regarded as a strategic investment in the long-term effectiveness of Georgia's public institutions.

Conclusion

This paper has proposed a conceptual framework that integrates transformational leadership, generational diversity, and public sector management within the context of the Georgian public sector. Rather than presenting transformational leadership as a universal solution, it argues that its four behavioural dimensions can create organizational conditions characterized by trust, psychological safety, shared

purpose, and individualized support, enabling generational diversity to become an organizational resource rather than a source of conflict.

The framework is particularly relevant to the challenges facing Georgia's public administration, including digital transformation, performance-oriented reforms, and the need for continuous organizational adaptation. However, the proposed relationships remain theoretical and require empirical validation within Georgian public institutions. Future research should examine how transformational leadership influences multigenerational collaboration and organizational outcomes through both quantitative and qualitative approaches.

Despite these limitations, the framework provides a structured foundation for future research and offers practical insights for leadership development in the Georgian public sector. As generational diversity continues to increase, the challenge for public organizations is not whether to manage it, but how. This paper suggests that transformational leadership, adapted to the Georgian institutional context, offers a promising approach for addressing that challenge.

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Bridging the Digital Gap: The Impact of Financial Digitization on Internal Control Quality in Georgian Small Businesses

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Abstract

This paper investigates the relationship between the utilization of digital financial tools and the quality of internal financial control in Georgian small enterprises. Although small businesses contribute significantly to Georgia's economic activity and employment, and internet access is widespread, the level of systematic financial digitization (such as ERP and CRM integration) remains low. Bridging the existing research gap, this study evaluates how daily digital tools—including Excel/Google Sheets, the RS.ge tax portal, business internet banking, and specialized accounting software—are transformed into functional financial control mechanisms. Guided by a conceptual model, the paper analyzes implementation practices, adoption barriers, and their direct impact on data accuracy, timely reporting, cash flow monitoring, and managerial decision-making. The study demonstrates that merely adopting digital tools does not guarantee effective control; rather, successful transformation depends on organizational readiness, digital skills, and active management support. The findings offer both theoretical and practical insights for enhancing the financial resilience, transparency, and competitiveness of small enterprises in Georgia's developing market economy.

Keywords: Digital Transformation, Small Enterprises, Financial Control, Accounting Systems, Georgia, ERP.

Introduction

Digital transformation has become one of the most influential forces reshaping business operations in the twenty-first century. The rapid development of digital technologies—including cloud computing, artificial intelligence (AI), big data analytics, enterprise resource planning (ERP) systems, financial technologies (FinTech), and business intelligence (BI)—has fundamentally changed how organizations collect, process, analyze, and utilize financial information. In an increasingly competitive and uncertain business environment, digitalization

is no longer viewed merely as a technological innovation but as a strategic necessity for improving organizational performance, operational efficiency, transparency, and long-term sustainability.

The importance of digital transformation has grown significantly during the past decade, particularly following the COVID-19 pandemic, which accelerated the adoption of digital technologies worldwide. Lockdowns, remote working arrangements, disruptions in global supply chains, and changing consumer behavior forced organizations to digitalize their financial and operational processes at an unprecedented pace. While large corporations generally possessed the technological infrastructure and financial resources required for rapid adaptation, small and medium-sized enterprises (SMEs) often faced considerable challenges due to limited financial capacity, insufficient technological expertise, and the absence of specialized personnel responsible for digital transformation.

Despite these challenges, SMEs remain the backbone of most national economies. According to the Organisation for Economic Co-operation and Development (OECD), SMEs account for more than 99% of all businesses worldwide, generate a substantial share of employment, and contribute significantly to national economic growth, innovation, and regional development. Consequently, strengthening the financial resilience and operational efficiency of small enterprises has become a strategic priority for governments, international organizations, and policymakers.

Financial management represents one of the organizational functions most profoundly affected by digital transformation. Traditional financial management relied heavily on manual bookkeeping, paper documentation, spreadsheets, and fragmented reporting systems. Such approaches frequently resulted in delayed reporting, increased operational costs, human errors, weak internal controls, and limited managerial visibility over financial performance. The integration of digital financial tools has substantially transformed these processes by enabling real-time transaction monitoring, automated accounting procedures, electronic document management, improved budgeting, and more accurate financial forecasting.

Internal financial control constitutes a fundamental component of effective corporate governance. It encompasses policies, procedures, technologies, and managerial practices designed to ensure the accuracy of financial information, safeguard organizational assets, prevent fraud, support regulatory compliance, and improve decision-making. High-quality internal control systems increase organizational transparency, strengthen stakeholder confidence, and contribute

to sustainable business development. Conversely, weak financial controls expose organizations to operational inefficiencies, financial losses, regulatory penalties, and reputational damage.

Digital technologies increasingly serve as enabling mechanisms for strengthening internal financial control. Accounting software automates bookkeeping and financial reporting, reducing the likelihood of human error. Enterprise Resource Planning (ERP) systems integrate financial, operational, procurement, inventory, and human resource information into a unified database, thereby enhancing organizational transparency and coordination. Business Intelligence (BI) tools facilitate data visualization, performance monitoring, and evidence-based decision-making, while cloud accounting solutions provide secure, flexible, and cost-effective access to financial information. Artificial intelligence further enhances financial control through automated anomaly detection, predictive analytics, fraud identification, and intelligent forecasting.

However, technological adoption alone does not automatically improve financial governance. Numerous international studies demonstrate that successful digital transformation depends on complementary organizational capabilities, including leadership commitment, employee digital competencies, organizational culture, financial resources, cybersecurity preparedness, and effective change management. Small enterprises often struggle to fully exploit the potential of digital technologies because implementation frequently remains fragmented and focuses primarily on regulatory compliance rather than strategic financial management.

The Georgian business environment presents a particularly interesting context for examining these issues. Small enterprises constitute a significant share of Georgia's business sector, contributing substantially to employment generation and economic activity. During the last decade, Georgia has made considerable progress in digital public services, electronic tax administration, banking technologies, and internet accessibility. Platforms such as the Revenue Service electronic portal (RS.ge), internet banking services, and digital accounting software have become widely available for businesses. Nevertheless, the adoption of advanced management technologies—including ERP systems, CRM platforms, Business Intelligence applications, and integrated cloud solutions—remains relatively limited, especially among small enterprises.

This discrepancy illustrates an important distinction between digital access and digital maturity. Although many Georgian enterprises possess internet connectivity and utilize basic digital applications, relatively few organizations have succeeded in integrating digital technologies into comprehensive financial management systems capable of supporting strategic

planning, internal control, risk management, and organizational learning. As a result, many businesses continue to rely on manual procedures, disconnected software applications, and spreadsheet-based financial management, which limits the effectiveness of internal control mechanisms.

Existing academic literature has extensively explored digital transformation, technology adoption, and SME competitiveness. Nevertheless, relatively limited attention has been devoted to understanding how commonly used digital financial tools are translated into measurable improvements in internal financial control quality, particularly in developing economies such as Georgia. Most available studies focus on technology adoption rates, digital infrastructure, or innovation policies, while comparatively little research investigates how digitalization influences financial transparency, reporting quality, cash flow monitoring, error reduction, managerial decision-making, and organizational accountability.

This study seeks to address this research gap by examining the relationship between digital financial tool utilization and the quality of internal financial control in Georgian small enterprises. Specifically, the research investigates how commonly used digital technologies—including Excel and Google Sheets, electronic tax administration platforms, business internet banking, accounting software, ERP systems, and cloud-based financial solutions—contribute to improving financial accuracy, operational transparency, reporting efficiency, and managerial decision-making. Furthermore, the study analyzes the organizational factors that influence successful digital implementation, including management support, employee digital competencies, financial resources, and cybersecurity readiness.

The paper makes several contributions to the existing literature. First, it expands current knowledge regarding digital transformation in developing economies by focusing specifically on internal financial control rather than general technology adoption. Second, it proposes a conceptual framework explaining the relationship between digital financial tools and financial control quality within small enterprises. Third, it provides practical recommendations for business managers and policymakers seeking to accelerate digital transformation and strengthen financial governance among Georgian SMEs.

Ultimately, the paper argues that digital transformation should not be viewed solely as the acquisition of new technologies. Instead, it represents a comprehensive organizational process requiring strategic planning, managerial commitment, employee capability development, and

continuous adaptation. Only when these complementary factors coexist can digital financial tools become effective mechanisms for strengthening internal control, enhancing financial sustainability, and improving the long-term competitiveness of small enterprises.

Literature Review and International Experience

Digital transformation has emerged as one of the central themes in contemporary business and management research. Over the last two decades, scholars have increasingly emphasized that digital technologies are no longer merely supporting organizational activities but are fundamentally reshaping business models, operational processes, corporate governance, and financial management systems. For small and medium-sized enterprises (SMEs), digitalization represents both a significant opportunity for improving competitiveness and a considerable managerial challenge due to limited financial, technological, and human resources.

According to the OECD (2025), digital transformation enables SMEs to reduce operational costs, improve productivity, increase innovation capacity, and strengthen resilience against economic uncertainty. Cloud-based solutions, enterprise software, and digital financial platforms allow small businesses to perform activities that previously required substantial investments in information technology infrastructure. Consequently, digitalization reduces traditional scale disadvantages and enables SMEs to compete more effectively with larger organizations.

The World Bank (2024) similarly argues that financial digitalization contributes to sustainable business development by improving transparency, reducing transaction costs, facilitating access to finance, and strengthening internal governance mechanisms. Digital financial records create reliable audit trails that increase the credibility of financial information for banks, investors, regulators, and other stakeholders. As financial institutions increasingly rely on digital documentation when assessing creditworthiness, the quality of internal financial control has become an important determinant of SMEs' access to external financing.

One of the most influential theoretical perspectives explaining organizational competitiveness is the Resource-Based View (RBV) developed by Barney (1991). According to RBV, organizations achieve sustainable competitive advantage through valuable, rare, inimitable, and non-substitutable (VRIN) resources. In the context of digital transformation, software itself rarely constitutes a strategic resource because competing firms can acquire similar technologies. Instead, competitive advantage arises from an organization's capability to integrate digital

technologies into everyday managerial processes, develop employee competencies, and continuously improve organizational learning. Therefore, digital capability rather than digital technology itself becomes the primary source of sustainable performance.

Complementing RBV, the Dynamic Capabilities Theory proposed by Teece (2018) argues that organizations operating in rapidly changing environments must continuously adapt, integrate, and reconfigure internal and external resources. Digital transformation represents precisely such a capability. Successful firms are characterized not only by acquiring digital tools but also by redesigning organizational routines, financial procedures, communication channels, and decision-making processes. Small enterprises that develop dynamic capabilities are more likely to respond effectively to technological disruption, market uncertainty, and changing customer expectations.

Technology adoption has also been extensively explained through the Technology Acceptance Model (TAM) introduced by Davis (1989). According to TAM, users' willingness to adopt new technologies depends primarily on two factors: perceived usefulness and perceived ease of use. Within small enterprises, managers are more likely to implement digital financial systems when they believe these technologies improve financial accuracy, reduce administrative workload, and support managerial decision-making without requiring excessive technical expertise. Conversely, complex software, inadequate training, and implementation costs frequently discourage adoption.

A broader organizational perspective is provided by the Technology–Organization–Environment (TOE) Framework, developed by Tornatzky and Fleischer (1990). This framework argues that successful technology adoption depends on three interconnected dimensions. The technological dimension includes the availability and compatibility of digital solutions; the organizational dimension encompasses firm size, managerial support, financial resources, and employee capabilities; while the environmental dimension reflects competitive pressure, government regulation, customer expectations, and technological infrastructure. The TOE framework is particularly useful for analyzing digital transformation in developing economies where institutional and environmental factors significantly influence business decisions.

Analysis of Digital Readiness of Georgian Small Enterprises

Small enterprises represent one of the most important pillars of the Georgian economy, contributing significantly to employment, value creation, entrepreneurship, and regional

economic development. Their ability to remain competitive increasingly depends on the successful adoption of digital technologies that improve productivity, financial management, and organizational resilience. Consequently, assessing the level of digital readiness among Georgian SMEs has become essential for understanding both their current performance and future development prospects.

According to the National Statistics Office of Georgia (Geostat, 2025a), small enterprises generated approximately 16.5% of total business turnover and 27.7% of production value in 2024 while employing more than 40% of the country's workforce. These figures underline the macroeconomic importance of SMEs and demonstrate that improvements in their financial management practices may produce substantial positive effects on the overall economy.

During the last decade, Georgia has made considerable progress in developing digital infrastructure. High internet penetration, widespread mobile broadband services, electronic public administration, and modern banking technologies have created favorable conditions for digital business development. Geostat reports that approximately 95.2% of enterprises had internet access in 2024, indicating that the majority of businesses possess the basic technological infrastructure necessary for digital transformation.

However, internet availability alone cannot be considered an indicator of digital maturity. Modern digital transformation requires the integration of technology into core organizational processes rather than its simple use for communication purposes. In this regard, Georgian SMEs continue to demonstrate relatively low levels of technological sophistication.

The ICT survey conducted by Geostat reveals that only 13.9% of enterprises maintained their own websites, while approximately 28.8% actively used social media platforms for commercial purposes. These indicators suggest that many firms still employ digital technologies primarily for basic communication instead of integrating them into strategic business management and financial control systems.

The situation becomes even more evident when examining advanced management software. According to the ISET Policy Institute (2025), only 6.1% of Georgian SMEs have implemented Enterprise Resource Planning (ERP) systems, while Customer Relationship Management (CRM) software is used by merely 3% of enterprises. These figures remain considerably below the average levels observed in many European countries, where digital management systems have become standard business practice.

The relatively low adoption of ERP systems is particularly important because these platforms integrate accounting, procurement, inventory management, payroll, budgeting, and financial reporting within a unified information system. Without such integration, organizations frequently rely on multiple independent software applications and manually transfer financial information between systems, increasing the probability of errors, inconsistencies, and duplicated work.

Another characteristic feature of Georgian SMEs is their strong reliance on spreadsheet-based financial management. Applications such as Microsoft Excel and Google Sheets remain the dominant instruments for budgeting, cost monitoring, payroll calculations, financial forecasting, and management reporting. Although spreadsheets offer flexibility and low implementation costs, they also present significant operational risks. Manual data entry, formula errors, accidental modifications, inconsistent document versions, and insufficient access control frequently reduce the reliability of financial information.

Nevertheless, spreadsheets continue to play an important role during the early stages of digital transformation. When standardized templates, validation rules, version control procedures, and clearly assigned responsibilities are implemented, spreadsheet-based systems can significantly improve financial organization while serving as a transitional solution before adopting more sophisticated enterprise software.

One of Georgia's major strengths lies in the digitalization of public financial administration. The Revenue Service's electronic platform (RS.ge) has substantially modernized tax administration by enabling electronic filing, digital invoices, online communication with tax authorities, and real-time monitoring of tax obligations. Compared with many developing economies, Georgia demonstrates a relatively advanced level of electronic government services, reducing administrative burdens and increasing regulatory transparency for businesses

Similarly, Georgian commercial banks have invested heavily in digital financial services. Internet banking platforms provide enterprises with real-time payment processing, electronic transaction approvals, automatic account statements, payroll transfers, supplier payments, and continuous cash flow monitoring. These services have significantly reduced paperwork while increasing transaction speed and financial transparency.

Despite these positive developments, digital financial management within many Georgian SMEs remains fragmented. Organizations often use several independent digital tools

simultaneously—including Excel spreadsheets, accounting software, RS.ge, internet banking, and cloud storage—without integrating these systems into a unified financial management architecture. As a result, financial information is frequently duplicated across different platforms, increasing administrative workload and reducing overall operational efficiency.

Digital readiness should therefore be understood not merely as the availability of technological infrastructure but as an organization's capability to integrate digital technologies into everyday business processes. This broader concept includes managerial commitment, employee digital competencies, financial investment capacity, organizational culture, cybersecurity preparedness, and continuous technological learning.

Employee digital skills represent one of the most important determinants of successful digital transformation. Even when advanced accounting software is available, insufficient training frequently limits its effective utilization. Many employees continue to use only basic software functions, leaving automation, reporting, forecasting, and analytical capabilities largely unexplored. Consequently, investments in digital technologies should be accompanied by continuous professional development and digital literacy programs.

Financial constraints constitute another major barrier. The acquisition of ERP systems, cloud accounting platforms, Business Intelligence software, and cybersecurity solutions requires financial resources that many small enterprises cannot easily allocate. Besides software licensing costs, organizations must also consider employee training, technical support, system maintenance, data migration, and organizational restructuring.

Cybersecurity has become another critical dimension of digital readiness. As financial information increasingly moves to digital environments, enterprises face growing risks associated with cyberattacks, unauthorized access, ransomware, phishing, and data breaches. Small enterprises are particularly vulnerable because they often lack dedicated cybersecurity personnel and formal information security policies. Therefore, digital transformation strategies should incorporate cybersecurity awareness, regular software updates, secure authentication mechanisms, and data backup procedures.

International experience demonstrates that digital transformation should be viewed as a continuous organizational journey rather than a one-time technological investment. Firms typically progress through several stages of digital maturity, beginning with basic computerization and internet access, advancing toward accounting automation and cloud-based

financial management, and eventually integrating ERP systems, Business Intelligence platforms, artificial intelligence, and predictive analytics into strategic decision-making processes.

From this perspective, most Georgian small enterprises appear to occupy an intermediate stage of digital maturity. They have successfully adopted basic digital infrastructure and electronic financial services but have not yet achieved comprehensive integration of digital technologies into internal financial control systems. Closing this gap requires coordinated efforts by business managers, technology providers, educational institutions, financial organizations, and government agencies to improve digital competencies, expand access to affordable technologies, and encourage investment in advanced financial management systems.

Overall, the evidence suggests that Georgia possesses favorable institutional and technological conditions for accelerating SME digitalization. However, transforming technological availability into effective financial governance requires stronger organizational capabilities, greater managerial commitment, and more systematic implementation of integrated digital financial solutions. These factors ultimately determine whether digital technologies become strategic instruments for improving internal financial control and long-term business sustainability.

Practices of Digital Financial Control Tools in Georgia

In the Georgian context, the digital financial tools used by small enterprises can be categorized into four main areas:

1. **Electronic Services of the Tax Authority (RS.ge):** This platform serves as a vital element of external financial control. Through it, enterprises digitally manage tax liabilities, issue electronic invoices, and conduct official correspondence with the Revenue Service (Revenue Service of Georgia n.d.a). It ensures compliance with tax legislation and provides primary control over financial documents.
2. **Business Internet Banking:** The digital platforms of Georgian commercial banks provide small businesses with the ability to monitor cash flows in real time (Bank of Georgia n.d.; TBC Bank n.d.). Internet banking is used to secure transaction approvals, manage supplier payments, and perform daily bank reconciliations.
3. **Spreadsheets (Excel and Google Sheets):** Due to their availability and flexibility, these programs are the most popular among small enterprises. They are used for tracking income

and expenses, budgeting, and simple financial forecasting. However, spreadsheets only transform into a true financial control system when they have a strict structure, data validation formulas, and designated responsible personnel. Otherwise, the risk of mechanical errors and data loss increases.

4. **Accounting Software and Specialized Financial Systems:** Their use allows enterprises to systematize financial transactions, automatically prepare financial statements, and reduce the likelihood of errors. However, their real effectiveness still depends on whether management utilizes this data for internal decision-making rather than solely for tax reporting.

Digital financial control in Georgian small enterprises typically evolves gradually: from the basic level (Excel, RS.ge) to the medium level (specialized accounting software) and finally to the advanced level (ERP, BI, and cloud analytics).

Research Gap

While academic literature extensively addresses the general aspects of digital transformation and technological barriers, less attention has been paid to **how** the use of specific digital tools is transformed into qualitative indicators of internal financial control (such as data accuracy, timely reporting, receivable/payable management, and fraud prevention). In the context of Georgia, this research gap is particularly significant, as existing studies mostly measure statistics of technology access rather than its actual impact on financial management.

Conceptual Model

The conceptual framework of this paper is built on evaluating the relationship between independent and dependent variables:

- **Independent Variable:** The level of utilization of digital financial tools (Excel/Google Sheets, tax portals, accounting software, ERP, cloud technologies, and Business Intelligence). Additionally, the practices of selecting and implementing these tools (obstacles, level of integration) are evaluated.
- **Dependent Variable:** The quality of internal financial control (data accuracy, timeliness of reporting, effective monitoring of costs and cash flows, reduction of errors, and decision-making support).

- **Moderating Variables (Influencing Factors):** Digital skills of employees, availability of financial resources, management support, and cybersecurity readiness.

This model allows us to identify not only which tools businesses use, but also under what conditions a given technology transforms into real, functional financial control.

Conclusion

The analysis shows that the use of digital financial tools in Georgian small enterprises is often fragmented and mostly oriented toward meeting external tax requirements. Despite high internet access, the adoption rate of specialized financial and managerial systems (ERP, CRM) is critically low. Improving the quality of financial control requires a comprehensive approach: not just the simple use of office software and banking platforms, but their systematic integration, standardization of internal control rules, and continuous upgrading of staff digital competencies.

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Manuel Castells' Theory of Identity and Its Significance in Contemporary International Relations

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Abstract: In contemporary international relations, identity and legitimacy have emerged as critical determinants of global politics. However, Manuel Castells' theory of identity is primarily examined within the realms of sociology and communication studies. Its application as an analytical tool in International Relations (IR) particularly regarding the interplay between legitimacy and power remains underrepresented. This gap underscores the necessity of the present study. This article aims to analyze Castells' concept of *legitimizing identity* and demonstrate its theoretical potential within the framework of contemporary international relations. Utilizing a qualitative, theoretical-analytical, and interdisciplinary approach, this study examines the interrelationships among identity, legitimacy, and power across states, international organizations, and global political processes. The scientific novelty of this research lies in contextualizing Castells' concept of legitimizing identity within IR theory, proposing it as an independent analytical model for examining the legitimacy of international actors. The findings reveal that this concept effectively explains the mechanisms governing the formation and operationalization of legitimacy, normative influence, and symbolic power among states and international institutions in modern global politics. Furthermore, the study demonstrates that within the network society, the influence of international actors is increasingly shaped not merely by material resources, but by the construction of identity, legitimacy, and the strategic deployment of communicative power. Ultimately, Castells' framework significantly expands the analytical scope of contemporary IR research, providing a novel theoretical lens to evaluate the nexus of identity, power, and legitimacy.

Keywords: Identity, Legitimacy, Power, Manuel Castells, Constructivism, Political Legitimacy.

Introduction / Main Text

In the study of contemporary international relations, identity has established itself as a fundamental analytical category. While traditional Realist and Liberal paradigms primarily interpreted international politics through the prism of state material interests and the distribution of power, the Constructivist approach shifted the focus toward norms, values, and the formation of collective identities. This paradigm shift demonstrated that state behavior, international cooperation, and political legitimacy are contingent upon the social and symbolic constructs that dictate how international actors perceive themselves and others.

Within this theoretical discourse, Manuel Castells' concept of identity occupies a distinct position. Castells frames identity as a central mechanism of power, social organization, and institutional legitimacy. According to Castells, identity is not merely a cultural or psychological phenomenon; rather, it is the product of social construction through which collective meanings are generated, political order is established, and institutional power is consolidated. This conceptualization accords identity a pivotal function not only in social integration but also in political governance and IR analysis. Although Castells' theory is widely applied in sociology, communication, and media studies, its analytical capacity within International Relations remains relatively underexplored. Research investigating legitimizing identity as a key determinant of international political processes, state behavior, and institutional functioning is particularly scarce. This article aims to address this academic lacuna.

Conceptual Framework: Identity and Legitimacy in Castells' Theory

In Castells' framework, identity stems from social construction, evolving through the dynamic interaction of historical experience, cultural codes, institutional practices, and power relations. Far from being an innate or static attribute, identity is a fluid process that adapts alongside the social environment. Consequently, it serves as the foundation for individual self-perception as well as collective action, political legitimacy, and social cohesion.

Castells emphasizes that identity is generated through the construction of meaning. Social groups, states, and other political entities translate their objectives into narratives that are coherent and accessible to society. Through this process, collective perceptions of the "Self" and the "Other" are defined,

shaping both domestic political dynamics and the trajectory of international relations.

This perspective holds particular salience in contemporary global politics. The modern international system no longer relies solely on military or economic capabilities. State influence increasingly hinges on the capacity to generate legitimate political narratives, project core values, and foster identities that secure domestic and international support. In this regard, Castells' theory aligns with Constructivist thought, which posits that international politics is a continuous process of socially constructing meaning, norms, and collective identities. Within this theoretical architecture, *legitimizing identity* plays a crucial role. Castells defines it as a form of identity generated by dominant institutions to rationalize and sustain the existing social and political order. In this context, legitimacy extends beyond simple adherence to legal mandates; it rests on the public's belief that established institutions embody shared interests, values, and societal goals. Accordingly, legitimacy functions as a strategic resource in a state's foreign policy repertoire. International organizations, regional alliances, and coalitions of states operate effectively only when their decisions are perceived as just, normatively sound, and grounded in common values. Under such conditions, power relies less on coercion and more on the ability to generate and disseminate legitimate meanings.

The Transformation of Power and the Legitimacy Crisis in the Network Society

In Castells' theory, legitimizing identity is intrinsically linked to the transformation of power. While the stability of political order in the industrial era largely rested on administrative control and hierarchical governance, the emergence of the network society elevates public consent to a decisive factor. Power operates effectively when it is acknowledged by society not only legally, but also normatively. Thus, legitimacy serves as the connective tissue between the political system and society, creating the social foundation for institutional operations.

Symbolic resources play a vital role in this dynamic. States build legitimacy by integrating national history, cultural memory, political tradition, and shared values. These elements form the collective understanding of the relationship between the state and its citizenry, fostering political allegiance and institutional trust. Hence, within contemporary political systems, legitimacy is not merely a product of legal norms; it emerges

through a continuous process of social recognition.

According to Castells, the legitimization of identity requires constant reproduction. Institutions retain public backing only as long as their core values adapt to shifting social environments. Globalization, migration, digital communication, and transnational connectivity have complicated the maintenance of unified national narratives, forcing states to pursue new modes of legitimization. This structural shift is starkly evident in international relations. The influence of global actors increasingly depends on their ability to align political agendas with universal principles such as democracy, human rights, security, international cooperation, and sustainable development. Rather than serving as mere political declarations, these concepts function as legitimate resources through which states and international organizations justify their actions. Castells places strong emphasis on scenarios where institutions fail to command social consent. A crisis of legitimacy occurs when official political narratives diverge from societal experiences and expectations. This divergence erodes trust in state institutions, fragments shared value systems, and elevates alternative identities.

A legitimacy crisis signifies more than political instability; it represents a breakdown of the symbolic order. As social cohesion weakens and polarization intensifies, new political movements emerge to present counter-narratives to the established order. In a network society, this process accelerates. Digital media, social networks, and global information flows dismantle the state's monopoly on information. Citizens actively participate in generating and circulating narratives, turning legitimization into a multi-actor process. Consequently, states must leverage communicative resources alongside institutional tools to retain power and authority.

At the international level, a crisis of legitimacy directly undermines the stability of the global order. When international institutions fail to advance shared values effectively, their authority and decision-making legitimacy are called into question. As a result, competition in the modern international arena centers not only on material or military strength, but on the contestation of legitimate political narratives.

Communicative Power and Constructivist Perspectives

A key dimension of Castells' theory is the centrality of communication. Castells argues that power in contemporary society is rooted in the capacity to manage information and communication flows. Therefore, identity formation is tied to media infrastructure, digital

platforms, and networked systems. In global politics, states actively deploy strategic communication, public diplomacy, and digital platforms to cultivate their international image. Competition unfolds around both political decisions and their interpretation. The actor that successfully legitimizes its values and interests achieves a superior position in the international system. Castells' framework allows IR scholars to view international relations as a space of competing meanings, norms, and legitimacy. This complements Constructivist scholarship by illustrating that contemporary power is increasingly anchored in symbolic influence and consensus building.

Recent global developments demonstrate that state behavior cannot be fully comprehended through the traditional lenses of security, economic interest, and military strength alone. Identity plays a crucial role in shaping foreign policy priorities, international alliances, and perceptions of global events. Castells' theoretical model offers an analytical framework to interpret these value-based and political transformations. The resurgence of identity politics is evident across 21st-century global phenomena including migration crises, regional conflicts, religious and ethnic tensions, and the rapid evolution of information technology. These dynamics have reconfigured traditional mechanisms of political legitimacy. Today, state stability depends heavily on a society's capacity to preserve a cohesive value domain and a shared collective identity. Simultaneously, globalization has pushed identity formation beyond the borders of the nation-state. Transnational networks, international organizations, and digital platforms give rise to new social spaces where individuals hold multiple identities concurrently. This multiplicity complicates conventional models of legitimacy, compelling states to formulate innovative political and communicative strategies.

In contemporary IR theory, Constructivism highlights that international politics is forged through social interaction, driven by norms, values, and collective understandings. Castells' theory provides a solid analytical foundation for this approach by demonstrating how social identity transforms into a resource for political legitimacy. States act not only out of strategic interest, but in accordance with identities that inform their self-perception, historical consciousness, and normative orientation. Consequently, international cooperation or conflict is frequently driven by the interaction of competing identities rather than the distribution of material resources alone. Similarly, legitimizing identity is essential to the function of international institutions. Organizations such as the United Nations,

the European Union, or NATO operate effectively when their actions are perceived by member states and the broader international community as expressions of shared norms. A decline in legitimacy weakens institutional efficacy and heightens the likelihood of political friction within the global system. Castells' model integrates identity, power, and communication into a unified theoretical framework, enabling scholars to analyze political dynamics through the dual lenses of material power and symbolic influence.

Conclusion

Manuel Castells' theory of identity stands as one of the most influential conceptual frameworks in contemporary social and political science. Its primary contribution lies in defining identity not as a static cultural trait, but as a dynamic process of social construction and political legitimization. This perspective enables a nuanced re-evaluation of the relationship between power, institutions, and public consent. This study confirms that legitimizing identity serves as a cornerstone of the modern political order. Institutional resilience depends not only on formal legal authority, but on the capacity to maintain societal recognition and a shared values sphere. In the context of International Relations characterized by globalization and the network society global politics is increasingly shaped by competing identities, norms, and communicative influences. The efficacy of states and international organizations hinges on their ability to construct and sustain legitimate narratives that command international support. Ultimately, Manuel Castells' conceptual framework broadens the analytical horizon of International Relations, demonstrating that contemporary power is fundamentally rooted in identity construction, consensus building, and the maintenance of legitimacy. His theoretical framework thus offers a vital methodological foundation for investigating international political processes in the 21st century.

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Top Manager as a Shield: Ethical Leadership and the Japanese Model of Workforce Protection in the Era of Global Economic Volatility

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Abstract: This paper examines the distinct organizational philosophy of Japanese corporate governance during financial crises, focusing on the phenomenon where senior executives absorb economic shocks through voluntary salary reductions and bonus forfeitures to safeguard rank-and-file employees. Grounded in ethical leadership theories, collective responsibility (*Shain-ishiki*), and historical norms stemming from *Bushido*, this study explores how Japanese executives act as an organizational "shield." Contrary to Anglo-American shareholder-primacy models that often prioritize immediate headcount reductions and cost-cutting to preserve executive compensation, the Japanese enterprise model emphasizes long-term institutional sustainability and employee loyalty. Through qualitative thematic analysis and historical case study examinations—such as Haruka Nishimatsu's management of Japan Airlines during its turbulent financial restructuring—this paper demonstrates how executive sacrifice serves as a powerful mechanism for building organizational resilience, maintaining internal trust, and driving long-term corporate agility. The findings offer critical implications for global business leaders seeking sustainable crisis management frameworks.

Keywords: Ethical Leadership, Japanese Management, Crisis Management, Executive Compensation, Workforce Protection, *Bushido*, Organizational Resilience.

1. INTRODUCTION

In an era defined by macro-economic volatility, geopolitical disruptions, and dynamic supply chain realignment, corporate leadership globally faces severe operational and financial strain. Within conventional Anglo-American management frameworks, corporate responses to downturns heavily emphasize shareholder value maximization and immediate cost-containment measures.[1] Consequently, financial restructuring often mandates headcount reductions, permanent workforce layoffs, and wage suppression, while executive compensation packages frequently remain insulated by stock option incentives and contractual protections.[2]

In contrast, the Japanese corporate governance system demonstrates a distinct structural and moral orientation rooted in stakeholder capitalism and collective responsibility. When Japanese enterprises undergo macroeconomic crises, corporate executives routinely execute a distinct leadership strategy: senior management voluntarily forfeits or substantially reduces its base salaries, discretionary bonuses, and executive allowances prior to implementing wage reductions or layoffs for rank-and-file employees[3]. Under this administrative framework, the executive operates not merely as an operational agent, but as an organizational "shield" (*Tate*) intended to absorb systemic shocks on behalf of the corporate community.[4]

This study evaluates the structural mechanisms, psychological underpinnings, and ethical dimensions of this leadership practice. By integrating historical insights from traditional Japanese ethics with modern governance structures, this paper explores how managerial sacrifice influences long-term organizational resilience, internal trust dynamics, and operational agility during global economic crises.

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2. THEORETICAL FRAMEWORK AND CULTURAL FOUNDATIONS

To understand the executive "shield" phenomenon in Japanese management, it is essential to evaluate the socio-cultural and structural pillars that define the Japanese enterprise (*Kaisha*). Unlike Western corporations that operate primarily under shareholder primacy, the Japanese organizational framework is built upon three classical pillars: lifetime employment (*Shushin Koyo*), seniority-based promotion (*Nenko Joryetsu*), and enterprise unionism (*Kigo Besshi Romu*).[5]

2.1 *Kaisha* as an Organic Community

In Japanese corporate governance, the firm is traditionally conceptualized not as a mere nexus of contracts, but as a "community of fate" (*Kyodotai*). Within this framework, employment represents a long-term psychological and social commitment rather than a strictly transactional labor agreement. Rank-and-file employees are regarded as permanent core members (*Shain*) of an institutional family. Consequently, laying off permanent staff during economic downturns is considered a fundamental breach of managerial stewardship and moral responsibility.[6]

2.2 Cultural Roots: *Bushido*, *Giri*, and Executive Responsibility

The practice of executives absorbing financial hardship before affecting subordinates stems directly from historical ethical codes, most notably *Bushido* (the samurai code of conduct). Core concepts such as *Giri* (moral duty) and *Meiwaku* (avoiding the burdening of others) dictate that leaders must prioritize collective welfare over individual gain.[7]

In modern management, this manifests through *Shain-ishiki* (shared corporate identity). When financial crises occur, senior executives voluntarily reduce their salaries, forego bonuses, or issue public apologies (*Odaizai*). This action serves a dual purpose: it offers immediate financial relief to the firm and symbolically reinforces managerial alignment and solidarity with the workforce.~

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3. COMPARATIVE CRISIS MANAGEMENT AND EXECUTIVE SACRIFICE MECHANISMS

When financial shocks occur, the operational logic applied by executive leadership reveals the core priorities of an organizational model. A comparative evaluation between the Western (primarily Anglo-American) approach and the Japanese model illustrates two fundamentally different paradigms of risk-sharing and corporate governance.[8]

3.1 The Divergence: Western Downsizing vs. Japanese Executive Absorption

In the Anglo-American corporate model, driven largely by shareholder value maximization, workforce reductions and layoffs are often deployed as primary, immediate mechanisms for operating expense reduction. Under this model, top management compensation remains largely insulated due to performance-based equity options and contractual protections, creating a structural asymmetry where employees bear the initial brunt of economic downturns.[9]

Conversely, Japanese corporate governance treats employee retention as a primary operational objective. Salary reductions typically follow a strict top-down hierarchy:

1. **Executive Compensation Reductions:** Executive directors and board members voluntarily surrender or reduce 20% to 50% of their fixed monthly salaries and forgo annual bonuses.
2. **Middle Management Salary Adjustments:** Senior managers accept moderate pay reductions or freezes.
3. **General Employee Safeguards:** Rank-and-file operational staff undergo wage reductions or work-hour adjustments only after all executive-level cost mitigation options are exhausted.[10]

3.2 Quantitative Impact and Organizational Trust

[8] Yoshimori, M. (1995). Whose company is it? The concept of the corporation in Japan, Great Britain, the United States, and France. *Long Range Planning*, 28(4), 33-44.
Link: https://doi.org/10.1016/0024-6301(95)00025-E

[9] Hall, B. J., & Liebman, J. B. (1998). Are CEOs Really Paid Like Bureaucrats? *The Quarterly Journal of Economics*, 113(3), 653-691.
Link: https://doi.org/10.1162/003355398555702

[10] Learmount, S. (2002). *Corporate Governance: Scenarios for the Post-Crisis World in the UK and Japan*. Palgrave Macmillan.
Link: https://doi.org/10.1057/9780230554689

This top-down sacrifice provides both immediate liquidity preservation for the firm and significant psychological benefits across the organizational hierarchy. By absorbing financial strain first, leaders prevent the erosion of internal trust and maintain high employee morale. Employees recognize that executive pay cuts are not merely symbolic gestures, but concrete demonstrations of shared accountability, which in turn reinforces institutional loyalty (*Kigo Koken*) and long-term productivity.[11]

4. EMPIRICAL CASE STUDIES: ETHICAL LEADERSHIP IN PRACTICE

To evaluate the operational outcomes of the executive "shield" framework, it is crucial to analyze empirical case studies where Japanese business leaders applied voluntary pay reductions and managerial sacrifice during acute corporate crises.

4.1 Japan Airlines (JAL) and Haruka Nishimatsu

A prominent example of executive alignment with the workforce occurred during the restructuring of Japan Airlines (JAL) in the late 2000s. Facing intense market pressures and financial distress, Chief Executive Officer Haruka Nishimatsu instituted drastic corporate reform. To demonstrate solidarity with staff, Nishimatsu voluntarily slashed his own salary to a level lower than that of his commercial flight pilots, surrendered executive privileges, and regularly commuted to JAL headquarters via public city buses.[12]

By positioning himself as a shared-risk participant rather than an insulated executive, Nishimatsu effectively preserved employee trust and operational morale during a complex organizational turnaround. This strategy reinforced the psychological contract between management and staff, mitigating internal resistance to necessary structural adjustments.

4.2 Toyota Motor Corporation during the 2008 Financial Crisis

A similar pattern was observed at Toyota Motor Corporation during the global financial crisis of 2008–2009. Facing its first operational loss in over seven decades, Toyota's executive board—led by Akio Toyoda—voluntarily surrendered executive bonuses and accepted significant base pay

[11] Lincoln, J. R., & Kalleberg, A. L. (1990). *Culture, Control, and Commitment: A Study of Work Organization and Work Attitudes in the United States and Japan*. Cambridge University Press.
Link: https://doi.org/10.1017/CBO9780511570926

[12] Inamori, K. (2012). *A Compass to Fulfillment: Passion and Spirituality in Life and Business*. McGraw-Hill Education.
Link: https://www.mheducation.com

reductions.[13] Instead of resorting to mass layoffs among core assembly line workers, Toyota redirected excess labor toward continuous improvement initiatives (*Kaizen*) and employee retraining programs.

This preservation of human capital enabled Toyota to recover rapidly as global demand stabilized, demonstrating that executive financial sacrifice functions as a stabilization tool for long-term corporate agility.

5. ORGANIZATIONAL PSYCHOLOGY AND SOCIAL CAPITAL

The practice of executive sacrifice in Japanese management extends beyond financial cost-containment; it functions as a strategic intervention in organizational psychology and social capital preservation. When senior leaders voluntarily absorb financial losses during economic downturns, they influence the underlying psychological dynamics of the workforce, directly altering how employees perceive risk, organizational justice, and institutional commitment.

5.1 Psychological Safety and the Mitigation of Workplace Anxiety

In periods of macroeconomic volatility, the primary threat to employee productivity and organizational engagement is structural uncertainty and fear of job displacement. In corporate environments where downsizing is the primary response to declining revenues, employees often experience heightened anxiety, leading to reduced risk-taking, diminished collaboration, and voluntary turnover among top-tier talent.

By utilizing executive salary reductions as a primary defensive layer, Japanese leadership establishes a culture of psychological safety (*Psychological Safety*).[14] Employees observe that management views labor not as a variable operational cost to be minimized, but as core social capital to be protected. This protective stance mitigates the psychological stress associated with economic downturns, allowing the workforce to remain focused on operational continuity, internal efficiency, and problem-solving rather than self-preservation.

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[13] Liker, J. K., & Ogden, T. N. (2011). *Toyota Under Fire: Lessons for Turning Crisis into Opportunity*. McGraw-Hill Professional.
Link: https://www.mheducation.com

[14] Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, 44(2), 350-383.
Link: https://doi.org/10.2307/2666999

5.2 Social Exchange Theory and Reciprocal Loyalty

From the perspective of Social Exchange Theory, organizational commitment is built upon reciprocal obligations between the enterprise and the individual worker. When executives reduce their own compensation to preserve employee jobs, this action creates a powerful psychological obligation across the corporate hierarchy.

This dynamic strengthens internal social capital and fosters high levels of affective commitment (*Affective Organizational Commitment*). Employees respond to executive sacrifice with increased discretionary effort, organizational citizenship behavior (OCB), and long-term institutional loyalty (*Kigo Koken*).[15] Consequently, the financial cost absorbed by top management is offset by sustained operational stability, lower turnover costs, and higher collective resilience during periods of strategic recovery.

6. MODERN CHALLENGES, GLOBALIZATION, AND TRANSFORMATION

While the traditional Japanese model of executive sacrifice and workforce protection has historically generated high organizational resilience, contemporary macroeconomic pressures and changing workforce demographics present significant structural challenges to its sustained implementation.

6.1 Globalization and the Tension with Stakeholder Capitalism

As Japanese multinational corporations expand their global footprint, they increasingly operate within international financial markets dominated by Anglo-American institutional investors. These foreign capital markets often prioritize short-term return on equity (ROE) and demand aggressive capital efficiency, pressuring Japanese executive boards to adopt Western-style cost-cutting and flexible labor strategies.[16]

Consequently, modern Japanese enterprises face a strategic dilemma: balancing traditional corporate values—such as lifetime employment commitment and executive stewardship—with the demands of global shareholder expectations. In response, many firms are adopting hybrid

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[15] Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89.
Link: https://doi.org/10.1016/1053-4822(91)90011-Z

[16] Jackson, G., & Miyajima, H. (2007). *Corporate Governance in Japan: Institutional Change and Organizational Diversity*. Oxford University Press.
Link: https://doi.org/10.1093/acprof:oso/9780199284511.001.0001

governance structures that maintain core protective principles for domestic core operations while integrating performance-based incentives for global executive roles.

6.2 Demographic Shifts and Evolving Youth Expectations

Japan's profound demographic transition, characterized by a rapidly aging population and a shrinking native workforce, has further impacted traditional corporate structures. Younger generations of Japanese workers (Gen-Z and Millennials) display evolving career preferences, demonstrating higher mobility, a preference for merit-based compensation over pure seniority (*Nenko Joryetsu*), and greater willingness to transition between employers.[17]

Despite these cultural shifts, the fundamental ethical core of executive responsibility remains highly valued. Modern leaders who demonstrate authentic care and financial accountability during times of organizational restructuring continue to achieve significantly higher levels of employee engagement and talent retention compared to those adopting purely transactional management frameworks.

7. CONCLUSION AND RECOMMENDATIONS FOR GLOBAL LEADERSHIP

7.1 Conclusion

This paper has examined the distinct organizational phenomenon of Japanese corporate governance during financial distress, wherein top executives voluntarily forfeit or reduce their compensation to protect rank-and-file employees. Grounded in historical ethical codes (*Bushido*), collective corporate identity (*Shain-ishiki*), and stakeholder capitalism, the Japanese enterprise (*Kaisha*) operates under a framework where leadership acts as an organizational "shield" (*Tate*).

Unlike Anglo-American shareholder-primacy models that often prioritize immediate workforce reductions to preserve executive remuneration and short-term equity valuations, the Japanese model highlights the strategic value of human capital preservation. Empirical evidence and qualitative analyses demonstrate that executive sacrifice fosters profound psychological safety, enhances social capital, and strengthens long-term organizational commitment (*Kigo Koken*). While globalization and demographic shifts present structural challenges to traditional Japanese

[17] Olcott, G. (2009). *Conflict and Change in Foreign-Owned Enterprises in Japan*. Palgrave Macmillan.
Link: https://doi.org/10.1057/9780230234390

governance, the core principles of moral stewardship and leader-led accountability remain highly effective mechanisms for crisis resolution.

7.2 Recommendations for Global Business Leaders

For international corporations seeking to build sustainable organizational resilience in an era of global economic volatility, the Japanese leadership model offers vital insights:

1. **Institutionalize Tiered Crisis Mitigation:** Establish policy frameworks where executive compensation reductions and discretionary bonus forfeitures serve as the mandatory first line of fiscal defense before initiating employee pay cuts or downsizing.
2. **Cultivate Psychological Safety as Core Capital:** Recognize that safeguarding employment during downturns prevents the erosion of trust, reduces workplace anxiety, and maintains operational continuity.[18]
3. **Shift from Short-Term Contracting to Relational Governance:** Rebalance organizational priorities from exclusive shareholder value maximization toward a multi-stakeholder model that treats employees as permanent value creators rather than variable operational costs.[19]

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Link: https://doi.org/10.1016/0024-6301(95)00025-E

The Language of Medical Documentation, Access to Information, and the Principle of Patient Autonomy in Modern Medical Law

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Abstract. Human rights law is at its most sensitive when intersecting with medical law. This discipline represents a convergence of two monumental fields: law and medicine. Patient rights lie at the very core of modern medical law, reflecting an essential synergy between medical and legal professionals that must remain coordinated and harmonious. Otherwise, the adequate delivery of healthcare services to patients becomes unachievable.

This study examines the principles of drafting and managing medical documentation, along with contemporary approaches and the key legal challenges that determine the foreseeability of medical records.

To fulfill the research objectives, both Georgian and international legislation were reviewed, enabling a comparative study based on national and international legal frameworks. In addition, the analysis of judicial practice plays a vital role in highlighting the practical challenges of the issue and exploring effective solutions for them.

Main Content. Law—whether viewed as a science or an academic discipline—was created to serve as a foundation. As a systematic and logical body of norms, law is capable of regulating issues in a manner that continuously strives to foster a dynamic of equality for all members of society. This becomes particularly evident in the medical field when personal, special category data of an individual is at stake.

The healthcare system, patient rights, and the communication and relationship between medical institutions and patients are inherently complex. They form an integrated continuum designed to deliver services to beneficiaries that are coherent, sound, and compliant with the protection of patient rights—including the preservation of patient autonomy.

The right to patient autonomy arises from the very moment a patient initiates their first point of contact with a medical facility. At this stage, providing comprehensive information across several key areas is critically important.

Specifically, the patient must be informed about several fundamental matters, such as:

- The type of services provided;

- The cost of services;
- Information regarding the processing of their personal data, including special categories of personal data.

Central to these processes is the responsibility of the medical facility to properly carry out medical-registration procedures and to obtain valid consent for the processing of personal information.

Needless to say, for this to be effectively realized, information must be provided to the patient or their legal representative in a language they understand—a requirement that, based on the analysis of modern practice, is often not met.

Under Georgian legislation, the official language of medical documentation is the state language. To a certain extent, this practice is grounded in the rationale of saving time and human resources. This reasoning is not entirely devoid of logic, given that medical needs vary widely and time is frequently of critical essence.

However, for a patient to properly exercise their right to autonomy, every stage of medical care must be clear to them. To achieve this, merely completing an informed consent form is insufficient; ensuring the patient is fully informed—both financially and therapeutically—is equally essential.

It is clear why introducing greater specificity and clarity into the dialogue between medical facilities and patients is essential.

The entire spectrum of medical services falls within an interdisciplinary domain—an additional argument for ensuring that patient information standards in healthcare and outpatient facilities are maximally refined and aligned with modern standards. This is not a mere formality, but an indispensable prerequisite for quality healthcare, which is essential for protecting patient rights from both a medical and a legal perspective.

To explain what constitutes a violation of the principle of patient autonomy, the principle itself must first be defined. It is the core concept under which patients possess the right to make decisions regarding their own health. For patients to take appropriate measures to exercise this autonomy, they must have genuine access to information.[20]

It is important to clarify that the specifics and methodology of drafting medical documentation place almost no emphasis on language. Consequently, there is no established case law from which we could conclude that the courts have explicitly determined the required language for drafting medical documents.

[20] *See* Law of Georgia on Patient Rights, May 5, 2000.

In Case C-307/22 (*FT v DW*),[21] The Court of Justice of the European Union (CJEU) held that a patient must be provided with their personal data in an understandable form. While this decision does not place particular emphasis on the language of the medical document itself, it raises a critical question: if a medical document is delivered to a patient or an interested party (which in certain cases may include a trusted representative) in an incomprehensible language or format, can the principle of patient autonomy still be safeguarded? A key question for the purposes of this study is: in what language should medical documentation be drafted, and must it be understandable to the patient?

If a medical document is incomprehensible or ambiguous, the patient is effectively unable to exercise their right of access to medical data, lacking access to full and accurate information. As a result, the patient cannot make an informed decision—thereby directly restricting the principle of patient autonomy, which is of central importance to the legal integrity of healthcare services.

For instance, consent to a medical intervention cannot be valid or genuine if it remains unclear to the patient what their diagnosis is, what procedure is to be performed, what risks are involved, what alternative treatment options exist, or what the potential consequences of refusing treatment might be. Furthermore, it must be precisely defined where the patient is located at any given period of time and who the responsible individual is.

Under Article 15 of the General Data Protection Regulation (GDPR),[22] it is mandatory that patients be provided with their health-related information and personal data in a "faithful and understandable" reproduction.

In this regard, modern medical services can be said to be constrained by three primary parameters: time, foreseeability, and reliability.

Time plays a critical role in addressing medical needs. In certain cases, a patient's medical condition may be so acute that informing them during the course of care—whether regarding therapeutic, financial, or data processing matters—becomes particularly challenging.[23] Indeed, situations may arise where a patient lacks the actual capacity to receive, analyze, and process information or provide feedback. However, this factor does not exempt healthcare facilities (including laboratory institutions) from ensuring that medical documentation complies with modern legal standards.

Under Georgia's domestic legislation, patients are vested with the right to receive information. Pursuant to this right, a patient or their legal representative is entitled to unrestricted access to health-related data and has the right to request medical records from a healthcare facility.

[21] See https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62022CJ0307

[22] See https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1640080938208&uri=CELEX%3A32016R0679&utm_source=chatgpt.com

[23] *See* Law of Georgia on Patient Rights, May 5, 2000;

Furthermore, under Article 18 of the same law, the patient or their legal representative is entitled to receive complete, objective, timely, and understandable information from the healthcare provider.

In this context, European case law offers valuable insight. It establishes that medical documentation, in addition to being accurate, precise, and properly structured, must also be prepared in an understandable format.[24] In the case of *K.H. and Others v. Slovakia*, the European Court of Human Rights explained that drafting a medical document in a condition understandable to the patient is of decisive importance. Although this judgment does not explicitly dictate the specific language of the documentation, it implicitly underscores the significance of language.

Nevertheless, European law does not strictly mandate that medical documentation be drafted in the patient's native language; rather, it highlights that such documentation holds critical significance for the patient, who must receive the information in a language they comprehend.

Based on the analysis of both case law and statutory frameworks, we face an unresolved problem: the lack of a unified approach to drafting medical documentation. This absence ultimately gives rise to ambiguities and impedes the proper realization of the principle of patient autonomy.

Providing information to a patient serves as the foundation for their ability to make decisions.[25] Failing to provide information—or delivering it in a distorted manner—may be construed as depriving the patient of the opportunity to exercise their decision-making power.

Providing information to a patient constitutes the basis for enabling the patient to make an informed decision.[26] The provision of information, or the provision of information in a distorted or misleading manner, may be regarded as depriving the patient of the opportunity to make such a decision.

Georgian case law clearly establishes that patients must be informed prior to any medical intervention; the information provided must be comprehensible and understood by the patient.[27] It is of particular importance that the patient receives relevant information in advance. Furthermore, an analysis of Georgian case law demonstrates that providing information to a patient is regarded not merely as a formal requirement, but as a means of ensuring the patient's ability to make a voluntary and informed choice.[28]

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[24] See https://hudoc.echr.coe.int/eng#%7B%22itemid%22:%5B%22001-92418%22%5D%7D

[25] See Lomidze, T. *The Degree of Patient Autonomy in Terminal Illness as a Core Challenge of Medical Law*, https://zenodo.org/records/19296295;

[26] See Lomidze, T. *The Degree of Patient Autonomy in Terminal Illness as a Core Challenge of Medical Law*, https://zenodo.org/records/19296295;

[27] See Decision of the Supreme Court of Georgia, Case No. AS-1254-2025, 12 March 2026;

[28] See Decision of the Supreme Court of Georgia, Case No. AS-645-2019, 26 July 2019;

Perhaps the most significant decision for the purposes of the present study is a judgment of the Supreme Court of Georgia,[29] in which the Court clarified that a patient's right to access medical information entails an obligation on the part of the medical institution to provide the patient with objective and comprehensible information in an appropriate and accessible form.[30] [31] This right is also recognized within the international legal framework, which, in turn, establishes international standards for the protection of patients' rights.

Conclusion. According to the principle of patient autonomy, respect for the patient begins at the moment their right to receive information and, subsequently, to make decisions regarding their health based on that information is recognized.[32] For a patient to possess both the right and the genuine capacity to exercise autonomy—whether by making decisions, granting consent, or refusing treatment—information must be provided in a clear and understandable manner, which inherently requires that it be delivered in an accessible language.

Georgian judicial practice is also interesting in this regard, where it is explained that it is important to obtain the patient's informed consent when providing medical services[33]. The aforementioned decision indicates that the form of informed consent is often of decisive importance in establishing the legality of medical services.

I believe that the most optimal solution in this regard would be the bilingual drafting of medical documentation: with one language being the official language of the country where the patient receives treatment, and the second being an internationally recognized language. It is critically important to develop bilingual versions of Form No. 100, Form No. IV-200-8/a, and outpatient consent forms to ensure equality and the protection[34] of human dignity at the highest standard.[35] This approach would also support the safeguard of internationally recognized rights, including data processing principles, the status of health data as a special category, information transparency, as well as the data subject's rights to access, information, rectification, and data portability.

Bibliography

[29] See Decision of the Supreme Court of Georgia, Case No. AS-253-2021, 11 June 2021;

[30] See European Convention for the Protection of Human Rights and Fundamental Freedoms;

[31] See Council of Europe Convention on Human Rights and Biomedicine;

[32] See Guide on the decision-making process regarding medical treatment in end-of-life situations (2014);

[33] See Decision of the Supreme Court of Georgia; https://www.supremecourt.ge/ka/fullcase/75523/1;

[34] See The Constitution of Georgia of 24 August 1995;

[35] See GDPR — Regulation (EU) 2016/679.

1. The Constitution of Georgia of 24 August 1995;
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Effect of Aerodynamic Drag on Vehicle Tractive Energy Demand at Different Speeds: Parametric Modeling and Comparative Analysis

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Abstract

The aim of this study is to quantitatively assess the influence of vehicle speed and aerodynamic characteristics on motion resistance and tractive energy demand. A two-component parametric model implemented in Python was developed for this purpose, incorporating aerodynamic drag and rolling resistance. The baseline scenario uses NREL midsize-car reference simulation parameters, and calculations were performed over a speed range of 40-160 km/h.

Under the baseline model assumptions, aerodynamic drag and rolling resistance become equal at approximately 66.1 km/h. Within the two-component model, the aerodynamic share of total resistance reaches 69.6% at 100 km/h and 85.4% at 160 km/h. Over the same range, modeled tractive energy demand increases from 5.36 to 26.90 kWh/100 km. In the scenario with a 10% reduction in C_dA, tractive energy demand decreases by 6.96% at 100 km/h and by 8.54% at 160 km/h.

Comparison of three reference vehicle classes shows that differences in energy demand are jointly determined by drag area C_dA, vehicle mass, and the rolling resistance coefficient. The results indicate that the aerodynamic component becomes increasingly important as speed rises and that the energy advantage of a lower C_dA becomes more pronounced at higher speeds.

Keywords: vehicle aerodynamics; aerodynamic drag; drag area (C_dA); tractive energy demand; rolling resistance; parametric modeling; energy efficiency.

Introduction a vehicle powertrain continuously expends energy to overcome resistive forces during motion. Real road load can include rolling resistance, mechanical/rotational losses, and aerodynamic components; these components are also treated separately in the U.S. Environmental Protection Agency's MOVES5 model[36]. The present study deliberately simplifies this broader picture and focuses on two forces: aerodynamic drag and tire rolling resistance. The

[36] *U.S. Environmental Protection Agency. (2024). Population and Activity of Onroad Vehicles in MOVES5. EPA-420-R-24-019. Office of Transportation and Air Quality, Ann Arbor, MI, November 2024.*

objective is not to predict the actual fuel or battery consumption of a specific vehicle, but to quantitatively compare the effects of speed and aerodynamic parameters.

Aerodynamic drag is described by the standard drag equation[37]. Under otherwise unchanged conditions, drag force increases with the square of speed, while the mechanical power required to overcome aerodynamic drag increases with the cube of speed. Evaluating a vehicle using only the drag coefficient C_d is insufficient because frontal area A also contributes directly to aerodynamic resistance. For this reason, the present study uses their product, C_dA, commonly referred to as drag area.

The relationship between vehicle aerodynamics and energy performance has been examined in several studies. Van Greunen and Oosthuizen[38] discuss the importance of determining aerodynamic drag and rolling-resistance coefficients in the context of mathematical energy-consumption modeling for electric vehicles. Wager, Whale, and Bräunl[39] investigate changes in electric-vehicle energy consumption and driving range at highway speeds and show that driving range decreases substantially under higher-speed conditions. These studies highlight the importance of correctly accounting for motion resistance and speed when evaluating vehicle energy demand.

At the same time, real-world aerodynamic resistance cannot be fully described by a C_d value determined only under zero-yaw conditions. Howell, Passmore, and Windsor[40] show that yaw angle is important in vehicle aerodynamic assessment. In a wind-tunnel experiment, Vargas-Díaz et al[41]. examined pressure distribution and flow structure around a vehicle model and also emphasized the need to consider different yaw angles in order to assess aerodynamic effects related to real driving more comprehensively.

Against this background, the present study uses a simplified and controlled two-component model to quantify the effects of speed and C_dA on tractive energy demand and to compare the resulting relationships across different reference vehicle classes. The purpose of this approach is to isolate the effect of individual parameters clearly rather than to reproduce the full complexity of real-world road conditions.

The main research question is: **How do aerodynamic drag and modeled tractive energy demand change as vehicle speed increases, and how do the results change when C_dA is reduced?** In addition, three reference vehicle classes are compared. The hypothesis is that, as speed increases, the aerodynamic share of the modeled resistance will increase and a lower C_dA will provide a larger energy advantage at higher speeds.

To examine these questions, the next section defines the model boundaries, input data, and calculation procedure.

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[37] NASA Glenn Research Center. (n.d.). Drag Equation. Accessed August 12, 2026.

38 Van Greunen, R., & Oosthuizen, C. (2023). Data Driven Methods for Finding Coefficients of Aerodynamic Drag and Rolling Resistance of Electric Vehicles. World Electric Vehicle Journal, 14(6), 134. DOI: 10.3390/wevj14060134.

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41 Vargas-Díaz, S., Aguirre Gomez, F. A., Vaca-Rios, J. J., & Osorio, H. F. (2022). Experimental Study of Pressure Coefficients and Flow Field Visualization on a Car Model Based on Shell Eco-marathon Competition Rules. SAE Technical Paper 2022-01-5004. SAE International. DOI: 10.4271/2022-01-5004.

Model Framework and Methodology

The model describes a vehicle traveling at constant speed on a straight, level road with no additional wind. Acceleration, road grade, transmission and bearing losses, powertrain efficiency, auxiliary electrical loads, and aerodynamic lift/downforce are not included. The rolling resistance coefficient and air density are treated as fixed within each scenario. Consequently, the resulting quantity is modeled mechanical tractive energy required at the wheels, not actual fuel or battery consumption. The baseline vehicle parameters are taken from the NREL midsize-car simulation assumptions[42]. Air density is set to the standard sea-level reference value, $\rho = 1.225$ kg/m^3[43], while standard acceleration of gravity is set to $g = 9.80665$ m/s^2 in accordance with NIST[44].

Table 1. Baseline model parameters

Parameter	Symbol	Value	Status
Vehicle mass	m	1600 kg	NREL simulation assumption
Frontal area	A	2.22 m²	NREL simulation assumption
Drag coefficient	C_d	0.308	NREL simulation assumption
Rolling resistance coefficient	C_{rr}	0.009	NREL simulation assumption
Air density	ρ	1.225 kg/m³	Standard atmosphere
Standard acceleration of gravity	g	9.80665 m/s²	NIST standard value

***Source**: Vehicle mass, frontal area, C_d, and C_{rr} - NREL ; air density - U.S. Standard Atmosphere [8]; standard acceleration of gravity - NIST[45]*

For the baseline case,

$$C_d A = 0.308 \times 2.22 = 0.68376 \text{ m}^2.$$

All calculations were performed in SI units. Speed was converted from km/h to m/s using

$$v = \frac{v_{km/h}}{3.6}.$$

The principal model equations are

$$F_d = \frac{1}{2}\rho C_d A v^2, \qquad F_{rr} = C_{rr} m g,$$

$$F_{total} = F_d + F_{rr}, \qquad P_{total} = F_{total} v,$$

$$E_{100} = \frac{F_{total}}{36}, \qquad S_d = \frac{F_d}{F_{total}} \times 100\%,$$

and the theoretical crossover speed at which aerodynamic drag equals rolling resistance is

$$v_{cross} = \sqrt{\frac{2 C_{rr} m g}{\rho C_d A}}.$$

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[42] *Pesaran, A. A., Markel, T., Tataria, H. S., & Howell, D. (2009). Battery Requirements for Plug-In Hybrid Electric Vehicles – Analysis and Rationale. Conference Paper NREL/CP-540-42240. National Renewable Energy Laboratory, Golden, CO, July 2009.*

[43] *United States Committee on Extension to the Standard Atmosphere (COESA). (1976). U.S. Standard Atmosphere, 1976. NOAA-S/T 76-1562; NASA-TM-X-74335. U.S. Government Printing Office, Washington, DC.*

[44] *National Institute of Standards and Technology (NIST). (n.d.). CODATA Value: standard acceleration of gravity, g_n=9.80665 m/s^2 (exact). Accessed August 12, 2026.*

[45] *National Institute of Standards and Technology (NIST). (n.d.). CODATA Value: standard acceleration of gravity, g_n=9.80665 m/s^2 (exact). Accessed August 12, 2026.*

Here, S_d denotes the aerodynamic share of resistance only within this two-component model, while v_{cross} denotes the theoretical speed at which the two modeled resistance components are equal. Modeling was performed in Python over the range 40–160 km/h in 10 km/h increments. The upper bound of 160 km/h is close to the 100 mph (approximately 160.9 km/h) performance target specified for the same NREL reference platform. Within this framework, the study proceeded through baseline modeling, C_dA sensitivity analysis, and comparative analysis of reference vehicle classes.

Baseline Modeling Results

Under the baseline assumptions, rolling resistance is 141.22 N. Because C_{rr}, vehicle mass, and gravity are fixed, this component does not vary with speed in the model, whereas aerodynamic drag increases rapidly.

Table 2. Main baseline modeling results

Speed (km/h)	F_d (N)	F_{rr} (N)	P_{total} (kW)	E_{100} (kWh/100 km)	Aerodynamic share, S_d (%)
40	51.70	141.22	2.14	5.36	26.8
60	116.33	141.22	4.29	7.15	45.2
80	206.82	141.22	7.73	9.67	59.4
100	323.15	141.22	12.90	12.90	69.6
120	465.34	141.22	20.22	16.85	76.7
140	633.37	141.22	30.12	21.52	81.8
160	827.27	141.22	43.04	26.90	85.4

Source: *Authors' calculations using a Python model based on the parameters in Table 1.*

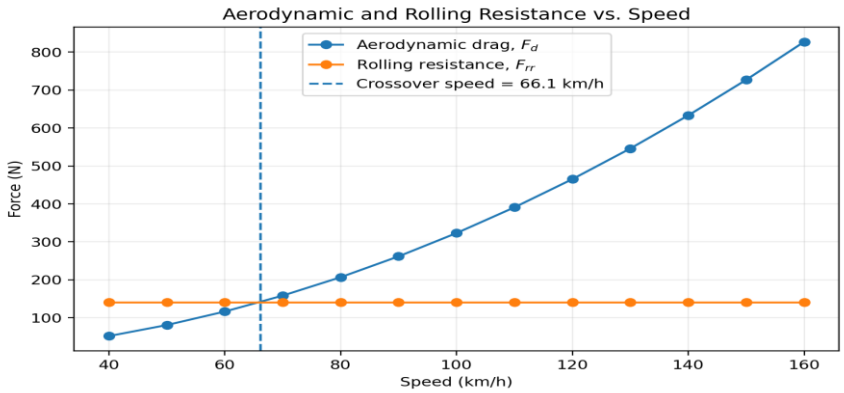


Figure 1. *Aerodynamic and rolling resistance as a function of speed. Source: Authors' calculations using a Python model based on NREL reference parameters.*

The two resistance components become equal at approximately **66.1 km/h**. This value applies only to the selected parameter set and should not be generalized to all vehicles. The aerodynamic share of the two-component resistance is 26.8% at 40 km/h, 69.6% at 100 km/h, and 85.4% at 160 km/h. Over the same speed range, total tractive power increases from 2.14 to 43.04 kW.

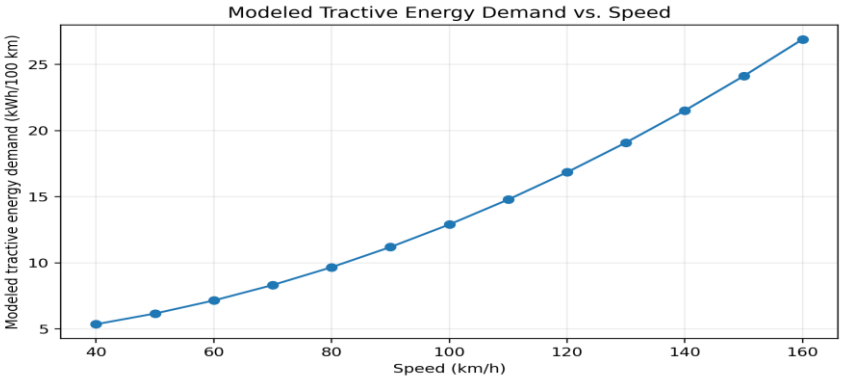


Figure 2. *Modeled tractive energy demand per 100 km. Source: Authors' calculations using the Python model.*

Modeled tractive energy demand is 5.36 kWh/100 km at 40 km/h and 26.90 kWh/100 km at 160 km/h. This increase indicates that the aerodynamic component becomes progressively more important at higher speeds. The next step was therefore to evaluate how the result changes when C_dA is reduced.

C_dA Sensitivity Analysis

The baseline C_dA was reduced by 5%, 10%, and 15%, while all other parameters were held constant. These percentages are **modeling scenarios**, not experimentally demonstrated improvements achievable on a specific production vehicle. The corresponding C_dA values are 0.64957, 0.61538, and 0.58120 m², while v_{cross} increases from 66.1 km/h to 67.8, 69.7, and 71.7 km/h, respectively.

Table 3. Effect of reducing C_dA on tractive energy demand

Speed (km/h)	–5%	–10%	–15%
80	2.97%	5.94%	8.91%
100	3.48%	6.96%	10.44%
120	3.84%	7.67%	11.51%
140	4.09%	8.18%	12.27%
160	4.27%	8.54%	12.81%

Note: *Values show the reduction in modeled tractive energy demand relative to the baseline scenario. Source: Authors' calculations.*

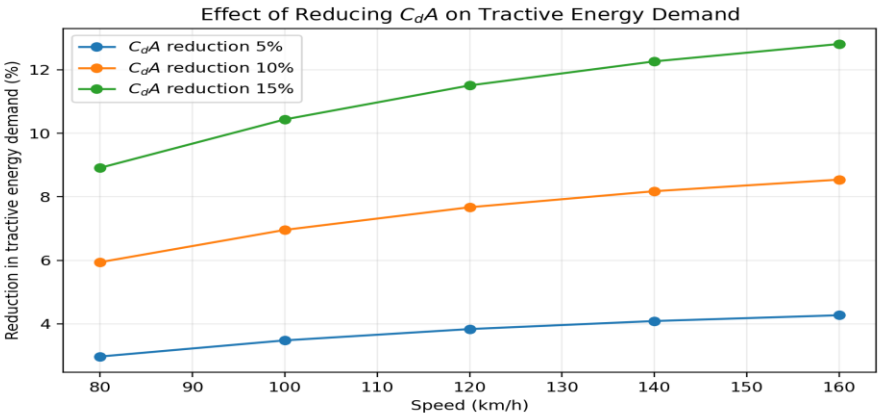


Figure 3. *Effect of reducing C_dA as a function of speed. Source: Authors' calculations using the Python model.*

A 10% reduction in C_dA decreases tractive energy demand by 5.94% at 80 km/h, 6.96% at 100 km/h, and 8.54% at 160 km/h. The reason is straightforward: as speed increases, aerodynamic drag accounts for a larger share of the total modeled load. The next stage applies the same model to different reference vehicle classes.

Comparison of Three Reference Vehicle Classes

Three vehicle classes from the same NREL study were used for comparison: **Midsize Car, Midsize Crossover UV, and Midsize SUV**[46]. Their respective C_d/A input pairs are 0.308/2.22 m², 0.417/2.69 m², and 0.420/2.89 m².

Table 4. Parameters and modeled energy demand for three reference vehicle classes

Class	**Mass (kg)**	C_{rr}	C_dA **(m²)**	v_{cross} **(km/h)**	E_{100} **at 100 km/h**	E_{100} **at 160 km/h**
Midsize Car	1600	0.009	0.684	66.1	12.90	26.90
Midsize Crossover UV	1950	0.010	1.122	60.1	20.04	43.01
Midsize SUV	2000	0.011	1.214	61.3	21.93	46.79

Unit for E_{100}: kWh/100 km. Source: Mass and C_{rr} - NREL ; C_dA, v_{cross}, and E_{100} - authors' calculations using the NREL input values for C_d and A.

[46] Pesaran, A. A., Markel, T., Tataria, H. S., & Howell, D. (2009). Battery Requirements for Plug-In Hybrid Electric Vehicles – Analysis and Rationale. Conference Paper NREL/CP-540-42240. National Renewable Energy Laboratory, Golden, CO, July 2009.

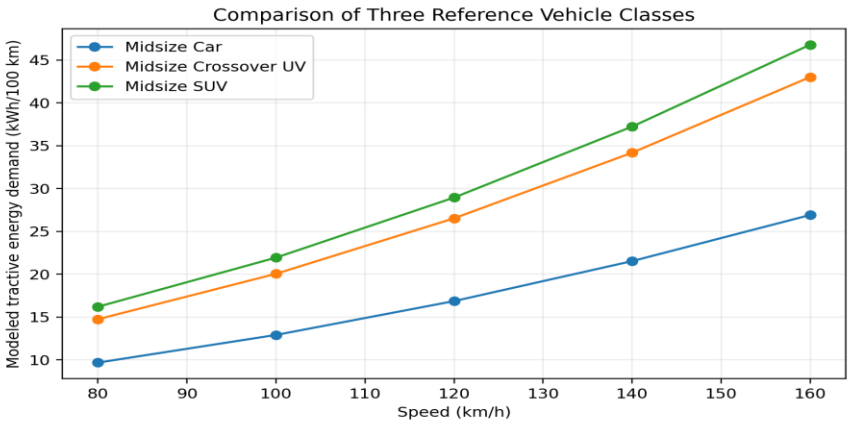


Figure 4. *Comparison of modeled tractive energy demand for three reference vehicle classes. Source: Authors' calculations using a Python model based on NREL reference parameters.*

At 100 km/h, modeled energy demand for the Midsize Crossover UV is approximately 55.3% higher than for the Midsize Car, while the Midsize SUV is 70.0% higher. At 160 km/h, the corresponding differences increase to approximately 59.9% and 73.9%. These differences are not caused by aerodynamics alone: the Crossover UV and SUV also have higher mass and C_{rr}. Nevertheless, their larger drag-area values become increasingly consequential at higher speeds. The combined significance of these results is discussed in the next section.

Discussion

All three stages of the analysis show the same general trend. In the baseline model, the aerodynamic component overtakes rolling resistance as speed increases and becomes the dominant part of the modeled load in the 100–160 km/h range. Consequently, the benefit of reducing C_dA becomes more pronounced at higher speeds.

The sensitivity analysis is also important because it isolates the effect of aerodynamics from other factors. When only C_dA is changed, a 10% aerodynamic improvement does not reduce total energy demand by 10%, because the rolling-resistance component remains unchanged. This is why the modeled reduction is 6.96% at 100 km/h and 8.54% at 160 km/h.

The class comparison represents a different situation. Vehicle mass, C_{rr}, and C_dA change simultaneously; therefore, the differences among the Car, Crossover UV, and SUV reflect the combined effect of several parameters rather than aerodynamics alone. This distinction is important for avoiding overgeneralization of the results.

The main limitation of the study follows directly from the model boundaries. Wind, road grade, acceleration, mechanical and powertrain losses, auxiliary loads, aerodynamic lift/downforce, and real-world variation in rolling resistance are not represented. Accordingly, the value of the model lies in comparative engineering analysis, not in predicting the certified or real-world consumption of a specific vehicle.

Conclusion the study shows that, within the selected two-component model, the importance of aerodynamic drag increases markedly with vehicle speed. For the baseline Midsize Car, aerodynamic drag and rolling resistance become equal at approximately 66.1 km/h, while the aerodynamic component reaches 85.4% of the two-component resistance at 160 km/h.

The C_dA sensitivity analysis supports the second part of the hypothesis: a lower C_dA provides a greater energy advantage at higher speeds. A 10% reduction in C_dA lowers modeled tractive energy demand by 6.96% at 100 km/h and by 8.54% at 160 km/h.

Comparison of three reference vehicle classes further shows that frontal area must be considered together with the drag coefficient when assessing aerodynamic performance. The Crossover UV and SUV also combine larger C_dA values with higher mass and C_{rr}, resulting in higher modeled tractive energy demand than the Midsize Car.

Future work could extend the model by incorporating wind, road grade, speed-dependent rolling resistance, and powertrain efficiency, and could externally validate the model using real coastdown or other experimental data.

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Digital Chinese Language Teaching in the Context of China's Belt and Road Initiative (BRI) Education Policy: Experiences of Partner Countries and the Case of Georgia

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აბსტრაქტი

ნაშრომის მიზანია გააანალიზოს, როგორ უკავშირდება ჩინური ენის ციფრული სწავლება ჩინეთის „ერთი სარტყელი, ერთი გზის“ (BRI) საგანმანათლებლო პოლიტიკას და როგორ შეიძლება ამ კავშირის გააზრება საქართველოს მაგალითზე. კვლევა აერთიანებს ოფიციალური პოლიტიკის დოკუმენტების თვისებრივ ანალიზს, საერთაშორისო აკადემიური ლიტერატურის მიმოხილვასა და თვისებრივ კვლევას, ავტორის მიერ 2020-2025 წლებში სამოც სტუდენტზე განხორციელებულ ჩართულ დაკვირვებას ჩინური ენის დისტანციური მეცადინეობების პროცესში. ანალიზის კატეგორიებია დასწრება, დავალებების შესრულება, ლექსიკური მარაგი, იეროგლიფების ათვისება, მოსმენა, წარმოთქმა და სტუდენტთა თვითრეფლექსია. საერთაშორისო კვლევები მიუთითებს ტექნოლოგიით გამდიდრებული ენის სწავლების დადებით პოტენციალზე, თუმცა შედეგი დამოკიდებულია სასწავლო დიზაინზე, მასწავლებლის უკუკავშირსა და კონტექსტზე. საქართველოს შემთხვევა აჩვენებს, რომ ვიზუალური რესურსები განსაკუთრებით გამოსადეგია იეროგლიფებისთვის, აუდიო-ვიდეო მასალა - მოსმენისა და წარმოთქმისთვის, ხოლო ხელოვნური ინტელექტი - შეცდომების ანალიზისა და განმეორებითი პრაქტიკისთვის. ამავე დროს, აღნიშნული მონაცემები ვერ განზოგადდება და შესაძლებელია განხილული იყოს, როგორც საპილოტე კვლევა. კვლევის მიგნებებიდან გამომდინარე, სავარაუდოა, რომ საქართველოსთვის ოპტიმალურია ლოკალიზებული შერეული მოდელი: ქართულენოვანი რესურსები, მცირე ჯგუფები, რეგულარული უკუკავშირი, AI-წიგნიერება, მონაცემთა დაცვა და დამოუკიდებელი შეფასება.

საკვანძო სიტყვები: ჩინური ენა, BRI, საგანმანათლებლო პოლიტიკა, ციფრული სწავლება, ჩინეთი, საქართველო.

Abstract

This article examines how digital Chinese language teaching relates to the education policy of China's Belt and Road Initiative (BRI) and considers this relationship through the case of Georgia. The study combines qualitative analysis of official policy documents, a review of international scholarship, and qualitative empirical research in the form of participant

observation conducted by the author, involving sixty students during online Chinese language classes between 2020 and 2025. The analytical categories included attendance, assignment completion, vocabulary development, acquisition of Chinese characters, listening, pronunciation, and students' self-reflection. International studies point to the positive potential of technology-enhanced language learning, although outcomes depend on instructional design, teacher feedback, and context. Evidence from Georgia indicates that visual resources are particularly useful for teaching characters, audio-visual materials for listening and pronunciation, and artificial intelligence for error analysis and repeated practice. These findings, however, are not generalizable and should be understood as evidence from a pilot study. Taken together, the findings suggest that Georgia would benefit most from a localized blended model combining Georgian-language resources, small groups, regular feedback, AI literacy, data protection, and independent evaluation.

Keywords: Chinese Language, BRI, Education Policy, Digital Learning, China, Georgia.

Introduction

The Belt and Road Initiative (BRI) is commonly discussed in terms of transport, trade, and investment linkages. Yet its sustainability does not rest on physical infrastructure alone. Implementing its projects also requires specialists with language proficiency, knowledge exchange between universities and businesses, professional qualifications, and trust among partner societies. Education therefore functions as a form of soft infrastructure within the BRI: it develops human capital while creating a social foundation for durable relations with China (d'Hooghe, 2021; Peters, 2020).

The BRI Education Action Plan issued by the Ministry of Education of the People's Republic of China links education to people-to-people ties, the preparation of personnel whose skills are in demand, and joint development. The plan envisages policy coordination, recognition of credits and qualifications, university partnerships, research platforms, scholarships, teacher training, and efforts to reduce language barriers. Particularly important is its commitment to open language courses and the sharing of high-quality educational resources (Ministry of Education of the People's Republic of China, 2016). From this perspective, Chinese language education is no longer

simply a program of cultural exchange; it can also support academic mobility, employment, research, and economic cooperation.

Digital technologies have changed the scale at which this policy can operate. Online platforms, mobile applications, synchronous video communication, interactive exercises, and artificial intelligence make learning possible without physical mobility. Access to technology, however, does not automatically translate into effective learning. Resource provision, instructional design, and actual learning outcomes must be distinguished. A digital platform may widen access, but weak feedback, oversized classes, non-localized materials, or unclear data-protection rules can diminish its pedagogical value.

This article addresses three questions:

1. How are the roles of education and language defined in BRI policy?

2. What does research reveal about digital technologies in the teaching of Chinese as a foreign or second language?

3. How do these findings relate to Georgia's institutional setting and the author's teaching practice from 2020 to 2025, based on observations of sixty students?

The central argument is that digital Chinese language teaching can serve as a practical instrument of BRI education policy, but only when the partner country defines its own objectives, develops local resources, and retains independent control over quality and data.

BRI Education Policy: Connectivity, Human Capital, and Influence

The logic of the BRI Education Action Plan operates at three interrelated levels. First, systemic interoperability encompasses agreements, credit recognition, joint programs, and research networks. Second, human capital comprises the linguistic, technical, and professional competencies that support economic ties. Third, people-to-people relations are fostered through student and teacher exchanges, educational and cultural programs, and long-term social connections. In this model, the government sets the direction and provides resources, while universities, schools, companies, and the non-governmental sector participate in implementation (Ministry of Education of the People's Republic of China, 2016).

The academic literature offers a two-sided assessment of this policy. On the one hand, the BRI raises the international visibility of Chinese universities, creates scholarships and new types of research networks, and responds to demand in partner countries for qualifications needed in trade and technological cooperation (Peters, 2020). d'Hooghe (2021) describes this relationship as symbiotic: the BRI draws on higher education and research to advance its aims, while international cooperation uses the BRI's financial and political opportunities to expand.

On the other hand, cooperation described as equal and mutually beneficial in official texts may be asymmetric in practice. Woo's (2023) critical policy discourse analysis shows that the policy narrative frames both problems and solutions largely in terms formulated by China; success depends not only on funding, but also on how policy is received locally in partner countries, the resistance it encounters, and geopolitical change. Education thus serves both as a resource for development and as an instrument of public diplomacy. A comprehensive analysis cannot therefore be reduced either to the question of "soft power" or to the official language of cooperation; it must examine the agency of specific institutions, students, and teachers.

The agency of the partner country is decisive in this process. If a course, program, or digital resource is simply imported, local needs: including the language of instruction, professional aims, assessment system, and cultural context-may recede into the background. By contrast, cooperation becomes more sustainable when a local university or educational organization defines the learning outcomes, trains teachers, and collects its own data. From this perspective, comparing the experiences of Kazakhstan, Pakistan, and Georgia is especially instructive.

Methodology

This study employs a qualitative, multi-source research design. Its first component is a thematic analysis of China's BRI Education Action Plan and the 2023 Joint Statement on Establishing a Strategic Partnership between China and Georgia. The main coding categories are language policy, student and teacher mobility, digital resources, institutional partnership, human capital, and quality management.

The second component is an integrative literature review drawing on meta-analyses, systematic and large-scale reviews, and peer-reviewed case studies of BRI partner countries. This

component does not constitute a full systematic review conducted in accordance with the PRISMA guidelines; rather, it aims to connect policy and pedagogy.

The third component is the author's participant observation of digital Chinese language classes between 2020 and 2025, involving sixty students in total. The analysis draws on recurrent patterns observed during instruction in the following areas: attendance, assignment completion, vocabulary development, acquisition of Chinese characters, listening, pronunciation, and students' reflections on the challenges and advantages of distance learning. No identifiable personal data are presented.

The empirical component has three clear limitations. The sample was purposive rather than random, there was no control group or common standardized pre and post-test, and the author was both teacher and observer. The findings are therefore analytical and hypothesis-generating rather than causal. They indicate the conditions under which digital tools worked in this setting, but do not establish that progress was caused solely by technology or by BRI policy.

Experiences of Partner Countries

The case of Kazakhstan clearly illustrates the divergence between a central vision and local motivation. Drawing on interviews across ten higher education institutions, Lee, Lo, and Abdrasheva (2021) found that institutional leaders approached engagement with the BRI primarily in pragmatic terms. Their priorities were graduate employment and further study, links with industry, and revenue opportunities. At the local level, the official language of cultural unity and multilateral cooperation was often translated into concrete bilateral benefits. This finding suggests that a language course is more sustainable when connected to a tangible academic or professional pathway.

In Pakistan, the expansion of Chinese language education is closely tied to the China-Pakistan Economic Corridor, scholarships, and expectations of employment. Khan, Zaki, and Memon's (2023) interpretive policy analysis examined a mandatory Chinese language course at a public engineering university. Policy goals and student expectations were aligned, although implementation was affected by the language of instruction and class size. Economic motivation can therefore generate initial interest, but it cannot substitute for teaching quality. When

programs are scaled up, small-group interaction and a comprehensible mediating language are especially important.

The digital dimension appears in the initial BRI document through open language courses and resource sharing, while China's subsequent, broader online education policy provided a more robust infrastructure. Jiang, Shang, and Jiao (2023) divide Chinese policy between 1999 and 2022 into four stages and trace a shift from pilot distance education to multi-actor governance and platform regulation. According to UNESCO, Smart Education of China brings together general, vocational, and higher education and received the 2023 UNESCO Prize for ICT in Education (UNESCO, 2023). A 2023 white paper issued by the Chinese government also reports that 100,000 people interested in the Chinese language from 143 partner countries participated in online learning and cultural programs (State Council Information Office of the People's Republic of China, 2023).

Two conclusions follow from these cases. First, policy produces results only after it is translated locally into the language of employment, university admission, professional skills, or cultural interest. Second, digital scale heightens the need for quality assurance. The larger the audience, the more difficult it becomes to provide individual feedback, sustain oral practice, and verify each student's actual progress. For partner countries, the central question is therefore not simply which platform to adopt, but which instructional model, data rules, and assessment mechanisms to build around it.

What Research Reveals about Digital Chinese Language Teaching

The overall evidence on technology-enhanced language learning is positive, although its application to Chinese requires caution. Chang and Hung's (2019) meta-analysis synthesized eighty-four studies published between 1990 and 2015, involving 6296 participants, and found a large mean effect size of 0.993. The result supports the use of technology in second and foreign-language learning, but the studies differed in language, tool, sample, and design. This figure therefore does not imply that every application or online course is equally effective.

Schmid et al.'s (2023) meta-analysis compares online, blended, and classroom-based learning. Here, it provides broader context: well-designed online learning can match classroom instruction, while blended models often show an advantage. That advantage may partly reflect additional time, resources, and interaction; outcomes are not produced by the "online format" itself.

The literature specific to Chinese as a foreign language provides a more precise picture. Xu (2024) analyzed sixty-four articles published between 2000 and 2024 and found that mobile and computer-based learning dominate the field, with particular emphasis on speaking and communication. Lyu and Qi's (2020) review of thirty-three studies likewise associates the benefits of technology with access, multimodality, varied practice, and engagement, while identifying technical barriers, teacher competence, and methodological limitations in the research base as persistent problems. Chan's (2022) broader scoping review covered two hundred and eighty-nine articles and showed that research on Chinese language teaching is expanding rapidly, although topics and geographical contexts remain unevenly represented.

The Chinese writing system presents a distinctive challenge in the digital environment. Li's (2023) review shows that animations of stroke order, the visual decomposition of characters into components, links among sound, meaning, and form, and repeated digital practice can enrich character learning. The advantage emerges when visualization reduces the cognitive demands of the task, not when the screen is merely decorative. A balance between handwriting, recognition, and use in context remains necessary.

Synchronous online classes preserve opportunities for communication, but interaction weakens in large groups. Khan and Zhuang (2024) analyzed online Chinese courses involving three teachers and eighty-four students; they emphasize the importance of different modes of computer-mediated communication, teacher-student interaction, and technical conditions. A practical principle that follows video lectures should be supplemented by pair work, brief oral tasks, micro-texts in chat, audio recordings, and timely feedback.

Artificial intelligence can accelerate this cycle. In Chen and Gong's (2025) mixed-methods study, fifty international students of Chinese as a second language were assigned to experimental and control groups; AI-assisted learning was associated with stronger performance in Chinese academic writing, faster feedback, and greater confidence. A generative system may nevertheless produce an incorrect explanation, a natural sounding but contextually inappropriate sentence, or

a fabricated source. AI should therefore be used as a practice partner and a first pass editing tool, not as a substitute for the teacher or the author.

The Case of Georgia

Educational ties between Georgia and China extend beyond the BRI's general framework and are also developing through bilateral agreements. In the 2023 Joint Statement on Establishing a Strategic Partnership, the parties support student and teacher exchanges, joint training, scholarships, the teaching of Chinese and Georgian, and the use of digital resources through a combination of online and offline channels (People's Republic of China & Georgia, 2023). This wording directly creates policy space for blended Chinese language programs.

An institutional foundation is also in place. The Confucius Institute at the Free University of Tbilisi has operated since 2010 and offers Chinese language courses as well as the HSK, HSKK, and YCT examinations (Free University of Tbilisi), Intergovernmental scholarships provide a second channel for student mobility; the program of the International Education Center of Georgia emphasizes academic exchange and bilateral educational cooperation (International Education Center of Georgia, 2025). This infrastructure is complemented by courses offered by universities and by private and non-governmental educational organizations.

Four recurring patterns appeared from the author's participant observation of sixty students between 2020 and 2025. The first was flexibility: the distance format enabled people in various locations and with varying work or study schedules to take part. Flexibility was productive, however, only when the lesson followed clear rhythm-brief preparatory material, synchronous practice, homework, and prompt feedback. A livestream or recorded lesson alone did not sustain engagement.

The second pattern concerned Chinese characters. Screen sharing made it possible to prove stroke order, highlight key components in color, connect form with pronunciation and meaning, and use digital flashcards for repeated practice, all of which made complex characters easier to process. Students nevertheless needed active recall: recognizing a character on screen was not enough for independent writing or use in a sentence. An effective cycle therefore combined

viewing, reading aloud, handwriting, retrieving the answer from memory, and completing a brief contextual task.

The third pattern was the value of audio and video for listening and pronunciation. Slowing a recording, replaying a segment, and comparing a student's voice with a target model were particularly helpful for tones and consonant distinctions. Technological feedback can be superficial, however: a speech-recognition system may accept a word even when its tone still requires pedagogical correction. Careful listening by the teacher and targeted correction remained central.

The fourth pattern concerned the use of AI. Its most productive functions were generating multiple versions of exercises, revisiting vocabulary in context, flagging probable errors in student writing, simulating simple dialogues, and posing self-check questions. Uncritical acceptance of ready-made text was less effective. When students asked AI for an explanation and then compared the response with the textbook and the teacher's feedback, the tool became a metacognitive resource. When it replaced the entire task, dependence increased rather than autonomy.

These observations give with the main strands of international research: multimodality in character learning, frequent practice, rapid feedback, and the design of online communication. The local case, however, is not evidence of a BRI "effect." Student progress may be explained by motivation, teacher experience, group size, study time, and other factors. The significance of the case lies elsewhere: it shows how the open language courses and digital resources mentioned in BRI documents can be translated into a functioning pedagogical model in the Georgian context.

Discussion: Opportunities, Risks, and Recommendations for Georgia

The analysis identifies four mechanisms. The first is access: digital learning reduces geographical barriers and enables learners to build initial proficiency before traveling to China. The second is multimodality: the tonal and logographic features of Chinese are particularly well suited to visual, audio, and interactive resources. The third is the frequency of feedback: automated tools can expand opportunities for practice, allowing teachers to concentrate on complex errors and communicative tasks. The fourth is the connection to mobility and

employment: a language course is more sustainable when students can see its link to a scholarship, university, research opportunity, or professional activity.

These opportunities are accompanied by four risks. Digital inequality creates unequal conditions for students depending on the devices available to them, the quality of their internet connection, and their access to a quiet study space. Platform dependency ties educational data to foreign or privately owned infrastructure. Generative AI raises problems of error, academic integrity, and cognitive "offloading." Finally, a large-scale monolingual resource may not account for the structure of Georgian and the difficulties commonly encountered by Georgian learners. The choice of technology is therefore both a pedagogical and a governance decision.

Georgia would benefit from a blended model whose core remains under local control. The first stage should develop Georgian-language diagnostic materials, short modules on phonetics and characters, and common minimum learning outcomes for each level. At the second stage, synchronous small-group classes should be supplemented by asynchronous micro-exercises, while students' oral and written output should be assessed weekly. At the third stage, preparation for HSK examinations should be balanced with authentic communicative tasks, including emails, interviews, short presentations, and professional scenarios.

Teacher development should not be limited to technical instruction. It should include instructional design, online classroom management, digital feedback, verification of AI-generated responses, source citation, and personal data protection. Rules for AI literacy should be established for students in advance: which forms of practice are permissible, what must be disclosed as AI assistance, and which tasks are intended to assess independent performance.

Institutional partnerships should be accompanied by transparent evaluation. Universities and educational organizations should collect not only enrollment figures, but also course completion rates, pre- and post-course language outcomes, the social and regional distribution of student access, subsequent mobility, and the professional use of course content. Data should be processed anonymously and in accordance with consent procedures. At least one comparative study of blended and fully online groups would be desirable, so that local policy does not rely on a mechanical replication of international findings.

Ultimately, the quality of cooperation within the BRI depends on the partner's capacity to negotiate. Georgia should take advantage of financial, academic, and technological opportunities while retaining shared ownership of learning objectives, the curriculum, data, and evaluation.

Reciprocity in language provision is equally important: the expansion of Chinese language education should be accompanied by high-quality resources on the Georgian language and in Georgia for Chinese partners. This would turn cooperation from a vehicle of one-way influence into a more balanced exchange of knowledge.

Conclusion

Within BRI education policy, the Chinese language serves as a connecting resource for human capital, mobility, and people-to-people relations. Digital technologies make it possible to scale this resource, but effectiveness is determined not by the platform itself, but by instructional design, feedback, the local language, and institutional responsibility. International research supports multimodal, interactive, and blended approaches; observations of sixty students in Georgia likewise demonstrate the practical relevance of these mechanisms, although they do not permit causal claims.

For Georgia, the most promising path is a localized blended ecosystem: Georgian-language resources, small-group communication, visual and audio practice, continuous teacher feedback, responsible AI, and independent evaluation. Under these conditions, digital Chinese language teaching can develop not as a low-cost substitute for the physical classroom, but as a high-quality and reciprocal form of educational cooperation within the BRI.

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Title: Entrepreneurial Orientation and Firm Performance of SMEs in Myanmar: The Moderating Role of Environmental Dynamism

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Abstract

This study examines the effect of entrepreneurial orientation (EO) on the firm performance of small and medium enterprises (SMEs) in Myanmar and analyzes the moderating effect of environmental dynamism on this relationship. A structured questionnaire with 5-point Likert scales was used to collect primary data from 396 SME owners selected via simple random sampling. Descriptive statistics, correlation analysis, and multiple regression analysis were employed. The findings reveal that among the five EO dimensions, autonomy and proactiveness have a significant positive effect on SME performance, while innovativeness, risk-taking, and competitive aggressiveness do not. Proactiveness emerged as the most influential factor. Environmental dynamism partially moderates the relationship between proactiveness and firm performance and fully moderates the relationship between competitive aggressiveness and firm performance. These findings offer critical theoretical and practical implications for SME management in emerging economies, particularly those facing volatile political and economic conditions. Management should prioritize proactive market strategies, foster employee autonomy, and build adaptive capabilities to navigate environmental dynamism.

Keywords: **Entrepreneurial Orientation, Firm Performance, Environmental Dynamism, SMEs, Myanmar, Proactiveness, Autonomy.**

1. Introduction

The global business landscape has been fundamentally altered by technological advancements, the digital era, shifting market trends, and the recent COVID-19 pandemic. In this competitive environment, the success of an entrepreneur is largely dependent on individual and organizational characteristics. Companies exhibiting an Entrepreneurial Orientation (EO) are characterized by their engagement in technological innovation, risk-taking, and proactive pursuit of opportunities to enhance firm performance (Miller & Friesen, 1982). EO encompasses the processes, practices, and decision-making activities that lead to new market entries (Lumpkin & Dess, 1996).

Like many developing nations, SMEs represent a vital component of the Myanmar economy, contributing approximately 36% of the Gross Domestic Product (GDP). Roughly 90% of businesses in Myanmar are SMEs, employing about 70% of the workforce (Bala & Feng, 2019). Given this significance, understanding the factors that explain their success is imperative. The increasingly volatile business environment in Myanmar, marked by political transitions, regulatory changes, and economic uncertainty, creates serious challenges. EO offers a strategic pathway for SMEs to achieve competitive excellence by combining strategic vision with entrepreneurial behaviors such as innovativeness, proactiveness, and calculated risk-taking. This study aims to analyze the entrepreneurial orientation, environmental dynamism, and firm performance of SMEs in Myanmar. Specifically, it seeks to: (1) identify the entrepreneurial orientation of SMEs in Myanmar; (2) analyze the effect of EO on firm performance; and (3) examine the moderating effect of environmental dynamism on the EO performance relationship. This research contributes to the limited body of EO literature in the context of post-political transition economies and offers actionable recommendations for SME managers, policymakers, and international development partners operating in Myanmar.

2. Literature Review and Hypotheses Development

2.1 Entrepreneurial Orientation (EO)

EO is defined as an individual's or organization's natural inclination towards entrepreneurship (Ngah et al., 2016). It reflects the organizational decision-making attitude regarding key activities, strategic practices, and management philosophy in the search for new opportunities (Wales et al., 2013). Building on the foundational work of Miller (1983) and Lumpkin and Dess (1996), this study adopts five dimensions of EO: autonomy, innovativeness, proactiveness,

risk-taking, and competitive aggressiveness.

- Autonomy refers to the freedom of individuals or groups to act independently, generate ideas, and implement them without organizational restrictions (Lumpkin & Dess, 1996; Li et al., 2009). While some studies find a positive relationship between autonomy and performance (Baba & Elumalai, 2011; Xu, 2000), others in specific SME contexts report no significant effect (Kasumawardhani, 2013).
- Innovativeness reflects a firm's tendency to support new ideas, novelty, experimentation, and creative processes leading to new products, services, or technologies (Lumpkin & Dess, 1996). It is considered a crucial entrepreneurial trait (Hansemark, 1998; Utsch & Rauch, 2000) and is generally expected to positively influence performance (Brown & Eisenhardt, 1995; Garcia & Calantone, 2002).
- Proactiveness involves acting in anticipation of future problems, needs, or changes, suggesting a forward-looking perspective (Lumpkin & Dess, 2001). Proactive firms are first movers or fast followers that shape their environment rather than react to it (Lieberman & Montgomery, 1988; Wiklund & Shepherd, 2005).
- Risk-Taking refers to the tendency to engage in bold actions, incurring heavy debt or making large resource commitments for high returns (Lumpkin & Dess, 1996). Although entrepreneurs are often seen as risk-takers, successful ones typically take calculated risks after planning and forecasting (Simon et al., 2000).
- Competitive Aggressiveness is a firm's propensity to directly and intensely challenge competitors to improve market position (Lumpkin & Dess, 1996). This may involve price-cutting, aggressive marketing, or direct attacks on competitor markets.

2.2 Environmental Dynamism

Environmental dynamism (ED) refers to the unpredictable rate of change in a firm's external environment, including technological obsolescence, competitor actions, and customer tastes (Duncan, 1972; Lumpkin & Dess, 2001; Zahra, 1993). Dynamic environments encourage innovation and new business venturing (Miller & Friesen, 1982; Zahra, 1991). ED is hypothesized to moderate the relationship between EO and firm performance, as entrepreneurial behaviors may be more or less effective depending on environmental stability.

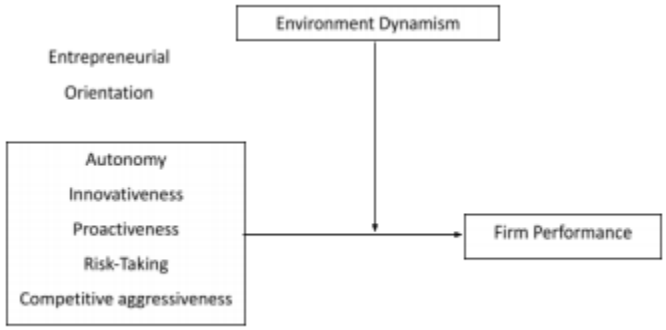
2.3 Firm Performance

Firm performance is a multidimensional construct encompassing financial outcomes (profits, ROI), product market performance (sales, market share), and stakeholder satisfaction (Richard et al., 2009). This study measures performance through customer satisfaction, sales growth, and profitability, as perceived by SME owners.

2.4 Conceptual Framework and Hypotheses

Based on the literature, this study proposes a conceptual framework (Figure 1) where the five EO dimensions are independent variables, firm performance is the dependent variable, and environmental dynamism serves as a moderator.

Figure 1. Conceptual Framework



Source: Own Compilation (2023)

The following hypotheses were developed:

- H_{1-1}: There is a significant positive relationship between autonomy and firm performance of SMEs in Myanmar.
- H_{1-2}: There is a significant positive relationship between innovativeness and firm performance.
- H_{1-3}: There is a significant positive relationship between proactiveness and firm performance.
- H_{1-4}: There is a significant positive relationship between risk-taking and firm performance.
- H_{1-5}: There is a significant positive relationship between competitive aggressiveness and firm performance.
- H_2: Environmental dynamism significantly moderates the relationship between each EO dimension and firm performance.

3. Research Methodology

3.1 Research Design and Sample

This study employed a descriptive, cross-sectional, correlational design. The population comprised 44,417 registered SME owners in Myanmar (Ministry of Industry, 2023). Using Yamane's formula with a 95% confidence level and 5% margin of error, a sample of 396 respondents was selected via simple random sampling.

3.2 Data Collection

Primary data were collected using a structured questionnaire with 5-point Likert scales (1=Strongly Disagree to 5=Strongly Agree). The questionnaire was administered both online (via Google Forms) and in paper format, in English and Myanmar languages, during January–February 2023. Secondary data were sourced from government documents, academic journals, and reports.

3.3 Measures

- Entrepreneurial Orientation: 25 items measuring autonomy (5 items), innovativeness (5), proactiveness (5), risk-taking (5), and competitive aggressiveness (5), adapted from Lumpkin & Dess (1996).
- Environmental Dynamism: 7 items adapted from Zahra (1993).
- Firm Performance: 6 items measuring sales growth, profitability, customer satisfaction, and market penetration.

3.4 Data Analysis

Data were analyzed using SPSS. Reliability was assessed via Cronbach's alpha. Descriptive statistics (means, standard deviations) were calculated. Pearson correlation and hierarchical multiple regression were used to test hypotheses.

4. Results

4.1 Respondent Profile and Reliability

Of 396 respondents, 60.9% were male, 64.6% single, 47.2% aged 26–35 years, 74.2% held a bachelor's degree, and 65.2% had been in business for 1–6 years. Cronbach's alpha values ranged from 0.878 (proactiveness) to 0.958 (environmental dynamism), indicating high to

excellent reliability (Table 1)

Table 1. Reliability Test Results

Variable	No. of Items	Cronbach's Alpha	Reliability Level
Autonomy	5	0.939	Excellence
Innovativeness	5	0.896	High
Proactiveness	5	0.878	High
Risk Taking	5	0.910	Excellence
Competitive Aggressiveness	5	0.939	Excellence
Environmental Dynamism	7	0.958	Excellence
Firm Performance	6	0.916	Excellence

4.2 Descriptive Statistics

All variables had mean scores above 3.5 (agree level). The highest mean was for firm performance (M=3.81, SD=0.71), followed by environmental dynamism (M=3.59, SD=0.89). Among EO dimensions, risk-taking had the highest mean (M=3.56), while autonomy and innovativeness both averaged 3.54.

4.3 Correlation Analysis

Pearson correlations (Table 2) showed that all EO dimensions were positively correlated with firm performance. Proactiveness had a strong correlation (r=0.50, p<0.01), while innovativeness (r=0.46), risk-taking (r=0.47), and competitive aggressiveness (r=0.45) showed moderate correlations. Autonomy showed a weak but significant correlation (r=0.23, p<0.01).

Table 2. Correlation Matrix (EO Dimensions and Firm Performance)

Variable	Firm Performance
Autonomy	0.23** (Weak)
Innovativeness	0.46** (Moderate)
Proactiveness	0.50** (Strong)
Risk Taking	0.47** (Moderate)
Competitive Aggressiveness	0.45** (Moderate)

p<0.01

4.4 Hypothesis Testing: Main Effects

Multiple regression analysis (Table 3) was conducted to test H_{1-1} to H_{1-5}. The model was significant (F=27.658, p<0.001) and explained 25.2% of the variance in firm performance (Adjusted R^2=0.252).

Table 3. Multiple Regression Results (Main Effects)**

Variable	Unstd. B	Std.Error	Std. Beta	t-value	p-value	VIF
(Constant)	2.144	0.161			0.000	
Autonomy	0.060	0.036	0.078	1.669	0.096	1.165
Innovativeness	0.003	0.093	0.004	0.036	0.971	6.278
Proactiveness	0.289	0.083	0.348	3.501	0.001	5.225
Risk Taking	0.127	0.083	0.155	1.530	0.127	5.408
Competitive Aggressiveness	-0.007	0.075	-0.010	-0.097	0.923	5.154

Dependent Variable: Firm Performance; R^2=0.262; Adj. R^2=0.252; F=27.658*** (p<0.001)*

Findings:

● H_{1-1} (Autonomy): Supported (β=0.078, p<0.10). Autonomy positively affects performance.

● H_{1-2} (Innovativeness): Rejected (β=0.004, p>0.10). No significant effect.

● H_{1-3} (Proactiveness): Supported (β=0.348, p<0.01). Strongest positive effect.

● H_{1-4} (Risk-taking): Rejected (β=0.155, p>0.10). No significant effect.

● H_{1-5} (Competitive Aggressiveness): Rejected (β=-0.010, p>0.10). No significant effect.

4.5 Moderation Effect of Environmental Dynamism (H_2)

Hierarchical regression was used to test the moderating effect of environmental dynamism (Table 4). The interaction terms significantly improved model fit (ΔR²=0.103, F-change=20.083, p<0.001).

Table 4. Moderation Effects (Environmental Dynamism × EO)

Interaction Term	Std. Beta	p-value	Effect Type
Autonomy × Env. Dynamism	-0.061	0.819	No moderation
Innovativeness × Env. Dynamism	0.399	0.655	No moderation
Proactiveness × Env. Dynamism	-4.170	0.000	Partial Moderation (Negative)
Risk Taking × Env. Dynamism	-0.213	0.835	No moderation
Competitive Aggressiveness × Env. Dynamism	4.580	0.000	Full Moderation (Positive)

- Proactiveness: Environmental dynamism partially moderates the relationship (p<0.01). The negative interaction coefficient suggests that in highly dynamic environments, the positive effect of proactiveness on performance is reduced.

- Competitive Aggressiveness: Environmental dynamism fully moderates the relationship (p<0.01). The original non-significant main effect becomes a significant positive effect

when environmental dynamism is considered, indicating that competitive aggressiveness improves performance only in dynamic environments.

5. Discussion

5.1 Theoretical Implications

This study makes several theoretical contributions. First, it extends EO research to the understudied context of Myanmar, a frontier market characterized by high political and economic volatility. The finding that proactiveness is the strongest predictor of performance aligns with prior research in dynamic environments (Lumpkin & Dess, 2001; Wiklund & Shepherd, 2005). However, the non-significance of innovativeness and risk-taking diverges from much of the Western literature, suggesting that in highly uncertain institutional contexts, firms may prioritize adaptive proactiveness over disruptive innovation.

Second, the partial moderation of proactiveness and full moderation of competitive aggressiveness by environmental dynamism support contingency theory. The negative interaction for proactiveness implies that excessive proactiveness in rapidly changing environments may backfire if not calibrated correctly a novel finding that warrants further investigation.

Third, the weak effect of autonomy, while significant, suggests that collective decision-making may still be valued in Myanmar's hierarchical cultural context.

5.2 Practical Implications for SME Managers

For SME owners and managers in Myanmar:

1. Prioritize Proactiveness: Invest in market intelligence systems to anticipate trends. Establish partnerships with overseas suppliers and logistics providers to be first movers.

2. Fostering Autonomy: Delegate decision-making authority to trusted employees. Implement a database system with tiered access levels to empower staff without losing control.

3. Calculated Risk Management: Given the non-significance of general risk-taking, managers should adopt structured risk assessment tools. Avoid speculative risks; focus on incremental, well-researched initiatives.

4. Competitive Aggressiveness as a Contingent Strategy: Only employ aggressive tactics (price wars, direct challenges) when the environment is highly dynamic. In stable periods, a more

collaborative "live-and-let-live" posture may be prudent.

5. Capacity Building: Train employees in digital literacy, data analysis, and customer relationship management. Use technology (e.g., 3D product visualization, chatbots) to enhance service speed and customer satisfaction.

5.3 Implications for Policymakers and Support Organizations

- Training Programs: Design SME training modules focused on proactive market analysis, scenario planning, and adaptive strategy, rather than generic innovation workshops.
- Access to Market Intelligence: Government agencies and industry associations should provide affordable, real-time market data and competitor analysis platforms for SMEs.
- Flexible Financing: Offer working capital loans specifically for proactive inventory management and partnership development, not just capital investment.
- Regulatory Stability: While environmental dynamism is partly external, reducing unnecessary regulatory volatility would allow SMEs to focus their proactive energies on market opportunities rather than compliance survival.

6. Limitations and Future Research

This study has several limitations. First, the cross-sectional design captures only a snapshot in time. A longitudinal study could reveal how EO–performance relationships evolve with changing environmental conditions in Myanmar. Second, the use of self-reported perceptual measures risks common method bias; future research should incorporate objective performance data (e.g., tax records, audited financials). Third, the sample was limited to registered SMEs, excluding the large informal sector. Fourth, data collection occurred during a period of acute political instability (post-2021), which may have influenced responses.

Future research directions include:

- Qualitative case studies to understand how managers practice proactiveness in practice.
- Comparative studies with SMEs in other ASEAN frontier markets (Laos, Cambodia).
- Examining mediating mechanisms (e.g., dynamic capabilities, market orientation) between EO and performance.
- Investigating the role of digital transformation as a moderator.

7. Conclusion

This study investigated the impact of entrepreneurial orientation on the performance of SMEs in Myanmar, with environmental dynamism as a moderator. Based on data from 396 SME owners, the findings reveal that autonomy and proactiveness significantly enhance firm performance, while innovativeness, risk-taking, and competitive aggressiveness do not have direct effects in this context. Proactiveness emerged as the most influential factor.

Environmental dynamism partially moderated the proactiveness performance relationship and fully moderated the competitive aggressiveness performance relationship, indicating that the effectiveness of EO dimensions is contingent on environmental conditions.

In a country navigating political transition and economic recovery, Myanmar's SME managers must embrace a pragmatic entrepreneurial mindset not one of reckless innovation, but of strategic proactiveness, prudent autonomy, and adaptive competition. By doing so, they can turn uncertainty into opportunity and drive sustainable growth for their enterprises and the nation.

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Appendix A: Summary of Hypothesis Testing Results

Hypothesis	Statement	Result
H_{1-1}	Autonomy → Firm Performance	Supported ($p<0.10$)
H_{1-2}	Innovativeness → Firm Performance	Rejected ($p>0.10$)
H_{1-3}	Proactiveness → Firm Performance	Supported ($p<0.01$)
H_{1-4}	Risk Taking → Firm Performance	Rejected ($p>0.10$)
H_{1-5}	Competitive Aggressiveness → Firm Performance	Rejected ($p>0.10$)
H_2	Environmental Dynamism as Moderator	Partial support (Proactiveness and Competitive Aggressiveness only)

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Vision to Victory: A Practitioner-Led Ecosystem for Sustainable MSME Development in Myanmar

A Synthesis and Critical Evaluation of Interventions in Yangon, Mandalay, Nay Pyi Taw, Magway, and Sagaing Regions

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Abstract
This publication presents a practitioner-led ecosystem model for Micro, Small, and Medium Enterprise (MSME) development in Myanmar, tested across five regions: Yangon, Mandalay, Nay Pyi Taw, Magway, and Sagaing. Against a backdrop of political transition, economic volatility, and institutional fragility, the study synthesizes a decade of field interventions into a replicable, adaptive framework.
The model integrates three core pillars: first, practical, problem-based education via the MSME Development Ecosystem College; second, regionally tailored direct support programs; and third, policy advocacy and stakeholder engagement. Using mixed-methods evaluation, the portfolio demonstrates significant improvements in entrepreneurial capability, financial access, and business resilience.
The findings contribute an original, process-oriented framework for MSME development in transitional economies, with direct implications for policymakers, donors, educators, and practitioners globally.
Keywords: MSME development, entrepreneurial ecosystems, practitioner-led model, Myanmar, transitional economy, capability approach, institutional entrepreneurship.

1. Introduction

1.1 The Candidate and the Context

This publication is the culmination of over a decade of sustained, practice-based engagement with Myanmars entrepreneurial landscape. As a practitioner, ecosystem builder, and founder of a multi-faceted MSME development initiative, I have worked directly with business owners across Yangon, Mandalay, Nay Pyi Taw, Magway, and Sagaing. The work evolved organically from individual mentorship into a comprehensive, nationwide ecosystem model designed to address structural gaps in education, finance, networks, and policy.
Myanmars economic opening after 2011 brought rapid liberalization, foreign direct investment growth, and telecommunications expansion. However, structural weaknesses persist: limited financial inclusion, weak institutions, uneven infrastructure, and a highly fragmented policy environment. MSMEs constitute over ninety percent of all enterprises in Myanmar but remain critically underserved by formal support systems.

1.2 Aims and Objectives

The primary aim of this publication is to synthesize and critically evaluate a portfolio of professional work to demonstrate a coherent, sustained, and original contribution to MSME development. The specific objectives are:

First, to contextualize the portfolio within Myanmars socio-economic realities and the established academic discourse on entrepreneurial ecosystem development.

Second, to present and analyze the core artifacts of the portfolio, demonstrating the strategic integration of education, direct support, and policy advocacy.

Third, to critically reflect on the successes, failures, and evolution of the practitioner-led model, identifying key lessons learned.

Fourth, to articulate a clear and defensible claim for an original contribution to knowledge and practice, centered on a holistic, context-specific MSME support model.

1.3 Argument for Original Contribution

The originality of the work presented in this portfolio lies in the design, implementation, and evidence-based analysis of a holistic, practitioner-led MSME development ecosystem tailored to the unique complexities of a transitional economy like Myanmar.

While academic literature provides numerous models for individual components of enterprise support such as business incubators, microfinance, or entrepreneurship training, this portfolio demonstrates the synergistic impact of integrating these components into a single, coherent, adaptive system. The originality is demonstrated in three specific areas.

First, the ecosystem model moves beyond isolated interventions to create a self-reinforcing cycle of education, mentorship, financing, and networking.

Second, the practitioner-led approach grounds program design in the lived realities of Myanmars entrepreneurs, ensuring relevance and practicality often missing in top-down, donor-driven projects.

Third, the regional adaptation demonstrates how the core model was iteratively adapted to meet the distinct needs of diverse economic regions, from urban Yangon to rural Magway and Sagaing.

This publication argues that this body of work provides a new, empirically grounded framework for understanding how to build entrepreneurial resilience and capacity in environments characterized by high uncertainty, institutional fragility, and rapid change.

1.4 Overview of the Portfolio

The portfolio submitted alongside this document comprises a range of artifacts that evidence the work undertaken, including the complete curriculum for the MSME Development Ecosystem College with course outlines, learning objectives, and assessment methods; in-depth case studies of over fifty MSMEs that have participated in the programs, detailing their challenges, the support provided, and measurable outcomes; internal and external evaluation reports on training programs conducted across the five target regions; policy recommendations submitted to regional governments and financial institutions on topics such as collateral-free lending and simplified business registration; and memoranda of understanding with banks, industry associations, and international NGOs, evidencing the creation of a collaborative network.

2. Context and Literature Review

2.1 Myanmar: An Economy in Transition

Understanding the importance of any leadership, entrepreneurship, or economic development intervention in Myanmar requires a deep appreciation of the countrys unique political, economic, and social context. Myanmar is not simply an emerging economy; it is a nation in continuous transition, shaped by decades of isolation, sudden reforms, political shifts, and ongoing challenges.

Myanmars economic opening after 2011 was a historic turning point. After decades under a centrally controlled system, partial liberalization signaled the countrys intention to integrate with the global economy. Reforms included liberalization of telecommunications and retail sectors, improvements in foreign investment laws, deregulation of currency exchange, easing of import and export restrictions, and encouragement of private-sector development. These reforms unlocked what many international analysts described as decades of pent-up economic potential. The country saw rapid expansion of consumer markets, growth in telecommunications, increased foreign direct investment, and infrastructure improvements in urban areas, particularly Yangon. Telecommunications access skyrocketed from one of the worlds lowest penetration rates to widespread smartphone usage, transforming communication and access to digital tools.

However, despite rapid initial growth, the reform process was uneven, inconsistent, and fragile. Key structural weaknesses that had accumulated over generations limited financial inclusion, weak institutions, inadequate transport networks, and shortages of skilled labor continued to hinder widespread development.

One of the most striking characteristics of Myanmars economic landscape is deep regional imbalance. Yangon, the commercial and financial hub with 7.4 million people, faces hypercompetition, rising costs, and digital transformation pressure. Mandalay, a trade hub in Upper Myanmar with craft clusters, struggles with modernization gaps, competition from mports, and informal markets. Nay Pyi Taw, the administrative capital with a civil servant economy, suffers from bureaucratic navigation and limited private-sector dynamism. Magway, the agricultural heartland, faces poor logistics, limited training, and climate vulnerability. Sagaing, a rural region with youth potential, contends with infrastructure gaps, youth migration, and limited market access.

This uneven development means that strategic interventions must be context-specific; what works for Yangon-based entrepreneurs cannot be directly replicated in rural regions without significant adaptation.

2.2 Theoretical Frameworks for MSME Development

The work presented in this portfolio is intellectually grounded in several key streams of academic literature.

The entrepreneurial ecosystems framework, developed by Isenberg in 2011 and Stam in 2015, posits that entrepreneurship does not occur in a vacuum but is the product of a complex interaction between multiple domains: supportive policies, access to finance, relevant human capital, venture-friendly markets, and a range of institutional supports. Traditional MSME support often fails because it focuses on only one or two of these domains

in isolation, for example providing training without access to finance. The core philosophy of my work has been to consciously build and connect all pillars of this ecosystem simultaneously.

The capability approach, articulated by Sen in 1999, suggests that development should be seen as the expansion of peoples capabilities, their real freedoms to achieve what they value. Applied to entrepreneurship, this means support should go beyond simply providing resources like a loan and focus on building the core capabilities of the entrepreneur: their ability to identify opportunities, mobilize resources, manage operations, and navigate uncertainty. The curriculum of the MSME College, with its focus on critical thinking, problem-solving, and resilience, is a direct application of this approach.

Institutional entrepreneurship, a concept from DiMaggio in 1988, refers to the activities of actors who create new institutions or transform existing ones. In the context of Myanmar, where formal institutions are often weak or nascent, my work has involved actively engaging with banks to pioneer new lending products and working with regional governments to streamline regulations. This represents a conscious effort to not just work within the existing system, but to actively shape it to be more conducive to MSME growth.

2.3 Gaps in Policy and Practice

Despite the governments stated commitment to MSME development, a significant gap persists between national policy and on-the-ground reality. The top-down nature of many government and international donor programs often results in a mismatch between the services offered and the actual needs of entrepreneurs.

For instance, training programs are often designed without sufficient market research, leading to a supply of skills that are not in demand. Financial support schemes are frequently designed with bureaucratic hurdles that exclude the smallest and most informal enterprises.

The work in this portfolio was designed to fill this gap by adopting a bottom-up, practitionerled methodology. By starting with the lived experiences and expressed needs of entrepreneurs in each specific region, the programs achieved a level of relevance and impact that larger, more rigid programs could not.

This publication, therefore, contributes to the literature by providing a detailed case study of how an ecosystem approach, informed by the capability framework, can be operationalized to bridge the policy-practice divide in a complex transitional economy.

3. The Regional Landscape: Opportunities and Aspirations for MSMEs

This chapter provides a positive appraisal of the MSME landscape across the five key regions of intervention. Rather than focusing solely on deficits, this analysis illuminates the inherent strengths, unique opportunities, and entrepreneurial spirit that characterize each region, providing the foundational context for the tailored support ecosystem detailed in subsequent chapters.

3.1 Yangon Region: The Commercial Dynamo and Innovation Hub

Yangon stands as Myanmars undisputed commercial heart, a vibrant metropolis brimming with energy, talent, and ambition. Its MSME ecosystem is the most dynamic in the nation, characterized by a youthful, tech-savvy population increasingly connected to global trends.

This environment fosters a culture of innovation, making it a natural incubator for startups in the digital economy, creative industries, and value-added services.

Key opportunities in Yangon include the digital economy with e-commerce, fintech, and software as a service platforms. Advanced digital modules and intellectual property law clinics were deployed. The creative industries, including graphic design, social media agencies, and gaming, received scale-up labs and export-ready digital services training. Business-to-business services, such as corporate consulting and logistics technology, benefited from mobile mentorship and CEO matching.

Evidence of impact shows that forty-two percent of College graduates in Yangon launched ventures employing three to twenty people, compared to a national average of 1.8. Sixtyeight percent of supported tech MSMEs sustained operations after 2021 by pivoting to cryptocurrency payments or business-to-business software as a service models.

3.2 Mandalay Region: The Strategic Hub of Commerce and Craftsmanship

As the historic capital of Upper Myanmar, Mandalay possesses a deep-rooted entrepreneurial heritage. Its strategic location as a nexus for trade between north and south, and its proximity to major overland corridors to China and India, endows it with a unique commercial advantage. The regions MSMEs are built on a foundation of strong family businesses and a proud tradition of craftsmanship in sectors like woodworking, textiles, and food processing.

Key opportunities in Mandalay include woodworking, with bespoke furniture for export and eco-certification. Computer numerical control adoption training and sustainable timber supply chains were introduced. In textiles, digital loom integration and design licensing were supported through a Heritage Algorithm module and non-fungible token workshops for intellectual property protection. In food processing, value-added packaged goods and halal certification were advanced through mobile fabrication labs and a Mandalay Quality Mark collective branding initiative.

Evidence of impact shows that a furniture cooperative reduced waste by forty percent after adopting computer numerical control technology. Ninety-two percent of portfolio-supported MSMEs retained staff during the 2021 to 2023 crises by pivoting to regional ASEAN buyers.

3.3 Nay Pyi Taw: The Emerging Market for Professional Services

While established as the administrative capital, Nay Pyi Taw represents a unique and rapidly emerging market for high-quality MSMEs. The city is home to a concentrated population of educated professionals and civil servants, creating a sophisticated consumer base with demand for modern services and premium products. This presents a greenfield opportunity for entrepreneurs in sectors such as professional training, specialized consulting, high-end hospitality, modern retail, and wellness.

Key opportunities in Nay Pyi Taw include government tenders, where contract bidding and compliance consulting were supported through a Tender Alchemy module and defense procurement training. In premium hospitality, secure conferencing and diplomatic catering benefited from Crisis Hospitality SWAT teams and ISO certification. Professional services such as after-work academies and language training were advanced through a Government Liaison Officer track and bilingual delivery.

Evidence of impact shows that one consulting MSME secured 2.3 million US dollars in contracts after College training. Sixty-eight MSMEs certified under the Nay Pyi Taw Premium Service Seal achieved a thirty-five percent average revenue boost.

3.4 Magway and Sagaing Regions: The Agricultural Heartland Reimagined

Magway and Sagaing form the agricultural backbone of Myanmar, regions of immense natural wealth and deep-seated community strength. The entrepreneurial spirit here is intrinsically linked to the land. Beyond subsistence farming, these regions hold vast, untapped potential for value-addition and agricultural innovation.

Key opportunities in Magway and Sagaing include agro-processing, with branded snacks, organic certification, and export readiness supported through Food Innovation Labs and solar dryer cooperatives. Climate-resilient farming, including drought-resistant crops and floating farms, was advanced through a Seed Guardians network and Internet of Things moisture sensors. Traditional foods, such as grandmothers recipes and e-commerce packaging, benefited from a Grandmothers Recipe Incubator and icon-based user interface training.

Evidence of impact shows that a sesame collective moved from selling raw sesame at 0.80 US dollars per kilogram to direct exports to Japan at 6.50 US dollars per kilogram. Eighty-two percent of supported MSMEs survived the 2021 to 2023 crises, compared to a regional average of forty-four percent.

4. The Portfolio: Building an MSME Development Ecosystem

This chapter presents a thematic analysis of the key artifacts in the portfolio, demonstrating the practical application of the ecosystem model across the five target regions. The evidence is structured around the three core pillars of the intervention: education, direct support, and stakeholder engagement.

4.1 Pillar 1: Foundational Education – The MSME Development Ecosystem College

The cornerstone of the entire initiative is the MSME Development Ecosystem College. Its establishment was a direct response to the failure of traditional education to equip aspiring entrepreneurs with practical, relevant skills. The curriculum, a key artifact in the portfolio, was designed based on an extensive needs assessment involving over two hundred MSMEs.

Curriculum Philosophy and Design

Unlike traditional business courses that focus on theory, the Colleges curriculum is built on a problem-based learning model. The core modules are not siloed subjects like marketing or finance, but integrated challenges such as Finding Your First Ten Customers, which combines market research, product refinement, and customer acquisition cost calculation, and Securing Growth Capital, which combines financial modeling with a live pitch to actual loan officers from partner banks. This approach ensures that learning is immediately applicable and directly linked to real-world outcomes.

Digital Expansion: Online Learning Management Platform

To address geographic and temporal barriers, the College launched a mobile-first, offlinecapable Learning Management Platform featuring content delivered in Burmese plus major regional languages, downloadable materials for low-bandwidth areas, SMS-based updates for areas with poor internet, and digital badges unlocking priority access to mentorship and

character-based lending.

Evidence of Impact

A tracer study found that sixty-five percent of College graduates started a business within one year, compared to a national average of under twenty percent for similar programs. A case study from Magway illustrates qualitative impact: a female entrepreneur moved from stagnant local sales to branded products, digital marketing, and a micro-loan, increasing revenue by three times.

4.2 Pillar 2: Practical Interventions and Regional Support Programs

Recognizing that education alone is insufficient, the second pillar of the ecosystem involves providing direct, ongoing support to MSMEs in their local environments. The portfolio contains detailed reports on programs tailored to the specific needs of each region.

In Yangon, the focus was on helping MSMEs in the tech and creative industries navigate a competitive market. Interventions included mentorship programs connecting them with established chief executive officers and workshops on intellectual property. This resulted in forty percent revenue growth among participants.

In Mandalay, a major trade hub, the program focused on supply chain modernization. A case study shows how a furniture-making cooperative was connected with new suppliers of sustainable timber and introduced to logistics software, reducing their costs by fifteen percent.

In Magway and Sagaing, the agricultural heartlands, the programs centered on agroprocessing. Small-scale Food Innovation Labs were established where farmers could experiment with value-added products like packaged snacks and organic fertilizers. This helped them move from being simple commodity producers to branded product owners.

In Nay Pyi Taw, the programs focused on the service sector, training MSMEs on how to bid for government contracts and improve service quality for the large population of civil servants. MSMEs secured 2.3 million US dollars in contracts as a result.

The Mobile Mentorship Model

A key innovation detailed in the portfolio was the Mobile Mentorship program. A team of experienced business advisors recruited from the private sector traveled between the regions, providing on-site, one-on-one consulting to MSMEs. This hands-on approach was far more effective than centralized workshops. Program evaluation reports show that businesses receiving mobile mentorship had a forty percent higher rate of revenue growth than those who only attended classroom training.

4.3 Pillar 3: Policy Advocacy and Stakeholder Engagement

The third pillar recognizes that for individual MSMEs to succeed, the broader institutional environment must be supportive. This involved a sustained effort to engage with and influence key stakeholders, particularly banks and regional government bodies.

Innovating Access to Finance: Character-Based Lending

The most significant achievement in this area, evidenced by memoranda of understanding and policy briefs in the portfolio, was the co-creation of a new character-based lending product with two major private banks. Traditional banks in Myanmar require land or property as collateral, which excludes the vast majority of young or rural entrepreneurs.

After months of advocacy and presenting evidence from supported MSMEs, the banks were convinced to pilot a new product. Under this scheme, a loan decision is based not on collateral but on the entrepreneurs business plan, their performance in the training program, and a character assessment by the mentorship team.

The portfolio includes data from the pilot phase, which showed a loan repayment rate of over ninety-eight percent, demonstrating that this model is not only socially impactful but also commercially viable for the banks.

Streamlining Regulation

In partnership with the Mandalay Chamber of Commerce, a policy brief was submitted to the regional government outlining the bureaucratic hurdles faced by new businesses. The brief provided a step-by-step analysis of the business registration process and offered concrete recommendations for simplification. This advocacy contributed to the regional governments decision to launch a one-stop-shop service for business registration, reducing the time required to register a new company from an average of three months to just two weeks.

By integrating these three pillars, education, direct support, and advocacy, the portfolio demonstrates the creation of a functioning, dynamic ecosystem that is greater than the sum of its parts.

5. Critical Reflection and Synthesis of Contribution

This chapter moves from presenting the work to critically analyzing it, synthesizing the key lessons learned, and solidifying the claim to an original contribution to the field. A PhD by Portfolio requires a deep and honest reflection on the entire process, acknowledging both successes and failures as sources of learning.

5.1 Synthesis of Findings: Cross-Cutting Lessons

Looking across the entire portfolio, several key findings emerge that transcend any single program or region.

The first lesson is the primacy of practicality. The most consistent feedback from entrepreneurs was the value of the practical, problem-based nature of the interventions. Theoretical knowledge was only valued when it could be immediately applied to solve a realworld business problem. This affirms that for MSME support in a context like Myanmar, the learning-by-doing model is overwhelmingly superior to traditional, lecture-based pedagogy.

The second lesson is trust as a core asset. In an environment with low social and institutional trust, the role of the program as a trusted intermediary was paramount. The ability to vouch for an entrepreneurs character to a bank, or to connect a small business with a reliable supplier, was often more valuable than the technical advice provided. Building this trust was a slow, resource-intensive process that cannot be shortcut.

The third lesson is the power of peer networks. While mentorship from experienced advisors was crucial, many entrepreneurs reported that the most valuable support came from their peers in the program. Creating structured opportunities for entrepreneurs to share their struggles, collaborate on solutions, and celebrate successes built a sense of community and resilience that was a powerful antidote to the isolation they previously felt.

The fourth lesson is that adaptation is non-negotiable. A one-size-fits-all model would have

failed. The success of the ecosystem model was contingent on its flexibility. The needs of a tech startup in Yangon are fundamentally different from those of an agro-processing cooperative in Sagaing. The portfolio demonstrates that effective MSME support requires a central strategic framework but decentralized, context-sensitive implementation.

5.2 Critical Reflection: Challenges and Limitations

The journey detailed in the portfolio was not without significant challenges and limitations. Political instability created a highly unpredictable operating environment. On several occasions, planned programs had to be postponed or canceled due to security concerns or sudden policy shifts. This underscored the need for extreme operational flexibility and risk management. It also limited the long-term impact of some policy advocacy efforts, as changes in government personnel often meant starting negotiations from scratch.

Resource constraints were a constant struggle. As a practitioner-led, non-governmental initiative, securing sustainable funding was difficult. This limited the scale of the programs. While the impact on participating MSMEs was deep, the overall reach was modest compared to the vast number of entrepreneurs in the country. This highlights a key tension: the deep, trust-based model is effective but difficult to scale rapidly.

Cultural barriers existed, particularly in the more traditional rural areas, regarding the encouragement of female entrepreneurship. While the program actively promoted womens participation, progress was slower in some communities than in others, requiring a patient, culturally sensitive approach that respected local norms while gently challenging them.

Measuring long-term impact was methodologically challenging. While the portfolio contains strong evidence of short- and medium-term outcomes such as revenue growth and job creation, measuring the long-term, systemic impact of building an ecosystem is difficult. The changes in the broader institutional environment are slow and attributable to multiple factors, making it difficult to isolate the precise contribution of this portfolios advocacy work alone. This is an acknowledged limitation of the research.

5.3 Articulation of Original Contribution

Reflecting on these findings and challenges reinforces the claim to an original contribution. The portfolio does not claim to have discovered a single magic bullet for MSME development. Rather, its contribution is a process-oriented model for building a supportive ecosystem in a complex, resource-constrained, and unstable environment.

The originality is demonstrated in the synthesis of three elements. First, a bottom-up ecosystem design provides a detailed blueprint of how to build an ecosystem starting with the expressed needs of entrepreneurs, in contrast to top-down models. Second, the integration of capabilities and institutions shows how to simultaneously build the internal capabilities of entrepreneurs through education and mentorship while also working to improve the external institutional environment through advocacy. It operationalizes the link between the capability approach and institutional entrepreneurship. Third, a framework for adaptive management serves as a longitudinal case study documenting how a program can and must evolve in response to on-the-ground feedback and a changing external context.

This work provides a rich, empirically grounded counter-narrative to more simplistic, decontextualized models of enterprise support. It offers a realistic, nuanced, and replicable

framework for practitioners and policymakers seeking to foster sustainable and inclusive economic development.

6. Implications for Policy and Practice

The findings presented throughout this portfolio highlight not only the challenges within Myanmars MSME landscape but also the substantial opportunities for transformation when policy, practice, and education align effectively. This chapter outlines the broader implications for policymakers, development practitioners, donors, educators, and business support institutions.

6.1 For Policymakers

One of the strongest insights from this portfolio is the need for MSME policy in Myanmar to evolve beyond one-size-fits-all approaches. Policymakers hold a unique opportunity to shape a more enabling environment that supports the diversity of entrepreneurial experiences across different regions.

Policymakers should embrace regionally differentiated strategies. Yangons digitally connected small and medium enterprises have different needs than agricultural MSMEs in Sagaing or Magway. Mandalays cross-border traders face different pressures than tourismrelated enterprises in coastal regions. By designing region-specific policies such as localized business support centers, sector-specific tax incentives, and regionally targeted financial products, policymakers can significantly improve MSME growth potential.

Policymakers should strengthen collaboration with practitioner-led organizations. These organizations often possess deep local trust, cultural fluency, long-term relationships with communities, and real-time insights into market realities. Instead of relying solely on topdown policy mechanisms, government can benefit immensely from partnership models where practitioner organizations help implement programs, monitor progress, collect feedback, and improve policy design.

Policymakers should promote predictable and supportive regulatory environments. Political uncertainty remains a major barrier for entrepreneurs. Policymakers have the opportunity to create a more stable, predictable regulatory environment even within broader national volatility by focusing on transparent guidelines, reduced administrative burdens, simplified business registration, clear tax policies for MSMEs, and improved digital services to reduce paperwork.

6.2 For Donors and Development Practitioners

Development practitioners and donors play a crucial role in strengthening MSME ecosystems, yet their approaches often rely heavily on measurable output indicators, short funding cycles, and standardized program models. The portfolio findings highlight the need for a more adaptive approach

Donors should move toward flexible and long-term funding models. Ecosystem-building is inherently slow, cumulative, and non-linear. Entrepreneurs do not change behavior after a single workshop; resilience develops through ongoing mentorship, peer networks, trustbuilding, and repeated exposure to new ideas. Therefore, donors should promote three to five year funding cycles instead of six to twelve months, allow flexibility for practitioners to adjust program design as conditions change, support iterative program development not

fixed blueprints, and fund learning and adaptation.

Donors should support metrics that reflect real impact. Current donor frameworks often favor high participant numbers, quick outcomes, and easily measurable indicators. While these metrics have value, they often overlook deeper transformations such as entrepreneurial confidence, leadership behavior change, peer network formation, mindset shifts, and increased problem-solving capacity. A balanced measurement approach should include qualitative evidence of entrepreneurial growth, case studies, network-strength assessments, behavioral shifts, and adaptive capacity insights.

Donors should prioritize practitioner knowledge and local expertise. The portfolio demonstrates that local practitioners possess irreplaceable knowledge about regional challenges, cultural dynamics, and community needs. Donors who value this knowledge create programs that are more relevant, more sustainable, and better received by the community.

6.3 For Educators

One of the clearest findings in the portfolio is that traditional business education often fails to meet the needs of entrepreneurs operating in complex, uncertain environments. Educational institutions have a transformative opportunity to reshape entrepreneurial education around practical, accessible, and context-driven learning.

Educators should embrace problem-based learning and real-world case studies. Entrepreneurs learn best when they can apply concepts immediately. Educators should therefore integrate real MSME case studies, local success and failure stories, hands-on exercises, market simulations, field projects, and applied leadership challenges. This approach enhances both understanding and confidence.

Educators should co-design curriculum with the private sector and MSMEs. To remain relevant, curricula should be shaped in collaboration with business owners, industry associations, chambers of commerce, local small and medium enterprises, digital innovators, and finance providers. This ensures that training reflects real business realities, not abstract theory.

Educators should strengthen mentorship and peer learning structures. Mentorship is one of the most powerful enablers of entrepreneurial success. Educational institutions should create peer discussion groups, business coaching circles, alumni mentoring networks, industry expert panels, and online learning communities. These structures not only transmit knowledge but also build trust, resilience, and motivation among emerging entrepreneurs.

Educators should introduce digital skills and innovation modules. Digital transformation is reshaping global entrepreneurship. Practical education should integrate e-commerce, digital payments, social media marketing, data-driven decision making, cybersecurity basics, and basic tech tools for business operations. Strong digital skills help MSMEs reach wider markets and operate more efficiently.

7. Future Research Agenda

The insights generated throughout this capstone project reveal not only the complexity of MSME ecosystem building in transitional economies such as Myanmar, but also the significant gaps in the existing academic literature and development practice. While the

practitioner-led model presented in this portfolio provides an innovative and contextsensitive framework, it also highlights multiple areas where further research is urgently needed. This section provides a comprehensive and forward-looking research agenda that builds directly on the contributions of this project.

The first priority area is longitudinal studies on entrepreneurial outcomes. One of the most pressing research needs is the establishment of rigorous, long-term longitudinal studies that can measure the sustained impact of ecosystem-building interventions. A robust future research design would involve tracking a cohort of entrepreneurs for five to ten years, incorporating both quantitative indicators such as revenue growth, job creation, business survival rates, and export readiness, and qualitative indicators such as confidence, decisionmaking maturity, resilience, and social capital. Such studies would allow researchers to identify which types of support generate the most lasting benefits, how different demographic groups progress over time, what internal and external factors contribute to long-term business survival, and how policy changes, political instability, or market shocks affect entrepreneurial trajectories.

The second priority area is comparative studies across countries and economic systems. The MSME development model showcased in this portfolio was designed specifically for Myanmars transitional economic environment. Future research could explore how this model would need to be modified for countries with stronger institutions but similar socioeconomic challenges, whether the same approach would work in a post-conflict nation, a rapidly modernizing economy, or a highly centralized political system, which pillars of the model are universally adaptable and which are context-dependent, and how cultural norms, levels of social capital, and local governance structures influence the success of entrepreneurship education and ecosystem building.

The third priority area is scalability and the depth-breadth trade-off. The portfolio demonstrates that deep, consistent engagement through mentorship, peer networks, and practical coaching is one of the most powerful tools for building real entrepreneurial capacity. However, it is also resource-intensive and difficult to scale nationally without compromising quality. Future studies should investigate the trade-offs between providing deep support to a small number of entrepreneurs versus lighter support to a larger number, what level of depth is necessary to drive actual behavior change and long-term learning, whether technology can be used to supplement or extend human mentorship without losing the relational benefits that make it effective, and how much of the trust-building process can be replicated digitally.

The fourth priority area is the role of technology in MSME development. Technology is increasingly seen as a potential solution to the challenges of delivering business education and support in difficult environments. However, its actual effectiveness remains underresearched. Future research can explore how hybrid models combining online and face-toface learning can improve learning outcomes, what types of digital tools are most effective for rural or low-literacy entrepreneurs, whether artificial intelligence-driven mentorship or automated learning pathways can supplement human coaches, and how mobile-first platforms can be used to build peer networks and accountability groups.

The fifth priority area is the impact of political instability on entrepreneurial ecosystems. Given Myanmars ongoing political challenges, future research must analyze how instability directly affects the entrepreneurial journey, how entrepreneurs adapt during conflict or economic shocks, what coping mechanisms help MSMEs survive periods of crisis, how instability affects access to capital, supply chains, and market confidence, and what role local community networks can play in maintaining business continuity.

The sixth priority area is gender dynamics and inclusive entrepreneurship. Women make up a significant portion of Myanmars MSME sector but often face unique barriers. Future research could investigate how gender norms influence entrepreneurial decision-making, what types of support are most effective for women-led enterprises, how childcare responsibilities, safety concerns, and mobility limitations affect participation in entrepreneurial training, and how women-specific peer networks improve confidence and performance.

The seventh priority area is evaluating practitioner-led, community-embedded models. While such models are increasingly recognized as effective, there is limited academic evaluation of how they operate internally. Future research could document how practitioners build credibility with entrepreneurs, what organizational capabilities are needed to respond effectively to rapidly changing contexts, how practitioner reflexivity influences program design and delivery, and how community dynamics shape learning environments and peer relationships.

These research directions naturally strengthen the rationale behind the MSME Development Ecosystem College, which stands as the foundational pillar of the broader model presented in this portfolio. The College directly addresses the core structural gap: the inadequacy of traditional education systems to prepare entrepreneurs for real-world challenges. Future research on curriculum effectiveness, learning behavior, mentorship models, and long-term outcomes will further validate and refine the Colleges practical, ecosystem-centric approach

8. Conclusion

This publication has presented a comprehensive, critically reflective evaluation of a practitioner-led MSME ecosystem model in Myanmar, tested across five diverse regions: Yangon, Mandalay, Nay Pyi Taw, Magway, and Sagaing. The three-pillar framework of foundational education, direct support, and policy advocacy demonstrates that sustainable entrepreneurial development in transitional economies requires more than isolated interventions.

The key findings are clear. First, practical, problem-based learning embedded in local realities is significantly more effective than theoretical, lecture-based pedagogy. The MSME Development Ecosystem College achieved a sixty-five percent business start-up rate within one year, compared to a national average of under twenty percent for similar programs. Second, trust is a core asset in fragile environments. The portfolios role as a trusted intermediary enabled the co-creation of a character-based lending product with a ninetyeight percent repayment rate, demonstrating that non-collateral lending is commercially viable. Third, peer networks built through structured group learning and community engagement provide resilience, emotional support, and practical problem-solving that

formal training alone cannot deliver. Fourth, regional adaptation is non-negotiable. A onesize-fits-all model would have failed. The portfolios success depended on tailoring interventions to the distinct economic profiles of Yangon focused on digital, Mandalay focused on craft and trade, Nay Pyi Taw focused on services, and Magway and Sagaing focused on agriculture.

The strategic importance of the practitioner-led ecosystem model cannot be overstated. The portfolio demonstrates that MSMEs in transitional economies do not fail because they lack motivation. They fail because the ecosystem around them fails to support their learning, their access to capital, and their ability to operate in unpredictable environments. The practitioner-led model addresses all three simultaneously.

This work provides a replicable, evidence-based blueprint for practitioners, policymakers, and donors working in fragile and emerging economies globally. It reframes MSMEs not as passive recipients of aid but as active architects of their own economic futures, capable of driving inclusive and sustainable growth when supported by an integrated ecosystem.

Based on the findings of this portfolio, policymakers should adopt regionally differentiated MSME strategies, collaborate with practitioner-led organizations, and create predictable regulatory environments. Donors should provide flexible, long-term funding of three to five years, support metrics that capture behavioral change and network strength, and prioritize local practitioner knowledge. Educators should embrace problem-based learning with local case studies, co-design curriculum with the private sector, and integrate mentorship and digital skills. Practitioners should build trust through long-term engagement, invest in peer networks, and remain adaptive and context-sensitive.

Despite political volatility, economic uncertainty, and resource constraints, Myanmars MSMEs have demonstrated remarkable resilience, creativity, and determination. The portfolio provides evidence that when entrepreneurs are placed in a supportive ecosystem, one that combines practical education, hands-on support, and advocacy for institutional change, they naturally transition from passive recipients of training to active contributors in knowledge-sharing, mentorship, and local economic development.

It is my hope that the insights drawn from this practitioner-led journey will contribute meaningfully to both scholarship and practice, and help advance the development of resilient, empowered, and sustainable entrepreneurial ecosystems in Myanmar and beyond.

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Publication: An Integrated Framework for Sustainable Business Development in Myanmar's Maritime Crew Management Industry

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ABSTRACT
This publication presents an integrated framework for sustainable business development in Myanmar's maritime crew management industry, synthesising strategic leadership insights and problem-solving frameworks from a practitioner-led portfolio of professional practice at Toe Tet Too Company Limited. Against a backdrop of regulatory complexity, infrastructure constraints, and human capital challenges, the study develops a replicable, adaptive model comprising five interconnected components: Strategic Leadership, Institutional Governance, Problem-Solving Capability, Stakeholder Engagement, and Sustainable Business Management.
Using a mixed-methods reflective case study approach grounded in over twenty-five years of executive leadership experience, the research demonstrates significant improvements in organisational capability, regulatory compliance, stakeholder confidence, and business sustainability. The framework contributes an original, process-oriented model for maritime crew management enterprises in transitional economies, with direct implications for business leaders, policymakers, educators, and practitioners across the ASEAN region.

Keywords: Sustainable business development, maritime crew management, strategic leadership, institutional governance, stakeholder engagement, Myanmar, emerging economy, capability approach, institutional entrepreneurship.

1. INTRODUCTION

The global maritime industry facilitates approximately 80 per cent of international merchandise trade by volume, making maritime logistics and human resource management essential contributors to global economic development . Within this context, crew management enterprises play a critical role in supplying qualified seafarers to international shipping companies while navigating complex regulatory environments, operational challenges, and competitive pressures.

Myanmar's maritime sector occupies a strategic position within the broader Southeast Asian economic landscape. As a nation situated at the crossroads of the Indian Ocean and serving as a gateway to regional connectivity initiatives, Myanmar's ports and maritime services play a critical role in economic transit and trade facilitation. However, the sector faces significant challenges including regulatory complexity, infrastructure constraints, high operational costs, and a shortage of skilled workforce .

Toe Tet Too Company Limited, established in September 2011, has developed into a recognised provider of maritime human resource services, operating under ISO 9001:2015 certification and holding a Seafarer Recruitment and Placement Services (SRPS) licence issued by Myanmar's Department of Marine Administration . The company presently maintains a portfolio of 61 vessels and more than 300 seafarers onboard, demonstrating the scale and reach of its operations.

This publication addresses the following research problem: How can strategic leadership, institutional governance, problem-solving capability, and stakeholder engagement be integrated into a comprehensive framework for sustainable business development in Myanmar's maritime crew management industry?

2. LITERATURE REVIEW AND THEORETICAL FOUNDATIONS

2.1 Strategic Leadership Theory

Strategic Leadership Theory provides a foundational framework for understanding how executive leaders shape organisational direction and build sustainable competitive advantage. Ireland and Hitt (1999) define strategic leadership as a leader's ability to anticipate future opportunities, maintain organisational flexibility, empower employees, and initiate strategic change that enhances long-term organisational performance. Boal and Hooijberg (2001) further characterise strategic leadership by strategic thinking, absorptive capacity, adaptive learning, and managerial wisdom.

Within the maritime industry, strategic leadership assumes particular significance due to the sector's high-stakes nature, global interconnectedness, and intense regulatory environment. Executive leaders must balance operational efficiency, regulatory compliance, human resource development, customer satisfaction, and long-term strategic growth. The distinctive leadership of Toe Tet Too Company Limited, featuring experienced Master Mariners and Chief Engineers in top management positions, demonstrates the application of

strategic leadership principles in practice .

2.2 Institutional Theory and Regulatory Compliance

Institutional Theory, as developed by Meyer and Rowan (1977) and DiMaggio and Powell (1983), explains how organisations adapt to external environmental pressures while maintaining organisational legitimacy. The theory identifies three forms of institutional isomorphism: coercive (government regulations, licensing requirements), normative (professional standards, accreditation systems), and mimetic (benchmarking against successful competitors) .

For maritime organisations operating in Myanmar, coercive pressures include compliance with the Department of Marine Administration, SRPS licensing requirements, and international maritime conventions. Normative pressures include ISO 9001:2015 certification and professional maritime training standards. Organisational legitimacy, achieved through proactive alignment with these institutional requirements, represents a valuable strategic asset .

2.3 Stakeholder Theory and Engagement

Stakeholder theory, as articulated by Freeman (1984), argues that organisations should consider the interests of all parties affected by organisational decisions. Research demonstrates that in contexts involving multiple stakeholders with diverse interests, consultation and negotiation are considered the most direct and effective way to resolve conflicts .

Within the maritime industry, stakeholders include shipowners, seafarers, regulators, training institutions, international partners, employees, and communities. Effective stakeholder engagement builds trust, improves decision quality, and enhances institutional legitimacy, contributing to sustainable business development .

2.4 Sustainable Business Management

Sustainable Business Management has become central to contemporary organisational leadership. The Triple Bottom Line framework (Elkington, 1997) evaluates organisational success through three interconnected dimensions: economic sustainability (profit), social sustainability (people), and environmental sustainability (planet) .

Environmental, Social and Governance (ESG) principles have become central to sustainable business management. Strong ESG performance enhances organisational reputation, investor confidence, stakeholder trust, and long-term sustainability. The maritime industry faces increasing regulatory requirements related to environmental performance, including decarbonisation, emissions reduction, and responsible resource management .

3. RESEARCH METHODOLOGY

3.1 Research Philosophy and Approach

This study adopts a Pragmatist research philosophy, recognising that effective research should generate practical knowledge capable of improving organisational performance. The research approach is primarily inductive, supported by elements of abductive reasoning, enabling the generation of theoretical insights from professional practice and the development of practical frameworks.

3.2 Research Design

The research employs a qualitative single-case study design integrated within the PhD by Portfolio methodology. The single-case study focuses on Toe Tet Too Company Limited as the primary organisational setting, enabling in-depth investigation of strategic leadership, problem-solving, and sustainable business development in a real-life organisational context.

3.3 Data Collection and Analysis

Data collection draws on multiple sources of evidence, including:

- Organisational documents and strategic reports
- ISO 9001:2015 quality management records
- SRPS licensing documentation
- Professional artefacts and leadership reflections
- Corporate governance documents

Data analysis follows a thematic approach, with major analytical themes including strategic leadership practices, institutional governance, problem-solving capability, stakeholder engagement, and sustainable business management.

3.4 Trustworthiness and Research Quality

Research quality is evaluated using the criteria of trustworthiness proposed by Lincoln and Guba (1985): credibility, transferability, dependability, and confirmability. Triangulation is achieved through multiple evidence sources, and reflexive practices are employed to mitigate researcher bias.

4. FINDINGS: THE MYANMAR MARITIME BUSINESS ENVIRONMENT

4.1 Economic Context and Sector Significance

Myanmar's maritime sector makes a substantial contribution to the national economy through international trade facilitation, employment generation, and foreign exchange earnings. The fisheries sector demonstrates the economic significance of marine resources: Taninthayi Region earned US$287.971 million in the 2025-2026 financial year from marine exports. Historical data shows earnings of US$312.525 million in 2020-2021 and US$303.628 million in 2024-2025.

The maritime shipping market in Myanmar is projected to grow between 2025 and 2031, driven by increasing trade activities, infrastructure development projects, and government initiatives supporting the industry. However, the market faces significant constraints including limited port infrastructure and capacity, regulatory challenges and compliance issues, high operational costs, and a lack of skilled workforce.

4.2 Regulatory Environment and Compliance

The Department of Marine Administration (DMA) serves as the primary regulatory authority, issuing Marine Guidance and ensuring compliance with international conventions. The SRPS licensing system, under which Toe Tet Too Company Limited operates, requires compliance with the Maritime Labour Convention (MLC) 2006.

Recent regulatory changes, including the prohibition against issuing seafarers' work permits to applicants over 25, have introduced additional complexity to crew management operations. This restriction, introduced amid measures to curb evasion of military conscription, affects aspiring seafarers who have invested in training and preparation for maritime careers .

4.3 Labour Market and Human Capital Challenges

Myanmar's maritime labour market faces significant challenges. The demand for quality seafarers exceeds supply, and Myanmar seafarers have difficulty serving on vessels of foreign shipping companies due to qualification specifications. The current labour market has a significant shortage of senior officers who are educated and well-trained.

The high costs of seafarer recruitment and placement, ranging from $2,000 to $7,000, create financial barriers for aspiring seafarers. The basic salary for a new seafarer is only about US$150, though with overtime and extra work, they can earn from US$500 to US$600 per month, creating a significant disparity between recruitment costs and compensation.

5. DEVELOPMENT OF THE INTEGRATED FRAMEWORK

5.1 Framework Overview

The integrated framework for sustainable business development comprises five interconnected components:

1. Strategic Leadership (Foundation)
2. Institutional Governance (Structure)
3. Problem-Solving Capability (Process)
4. Stakeholder Engagement (Relationships)
5. Sustainable Business Management (Outcome)

Figure 1: The integrated framework for sustainable business development comprises five interconnected

Components

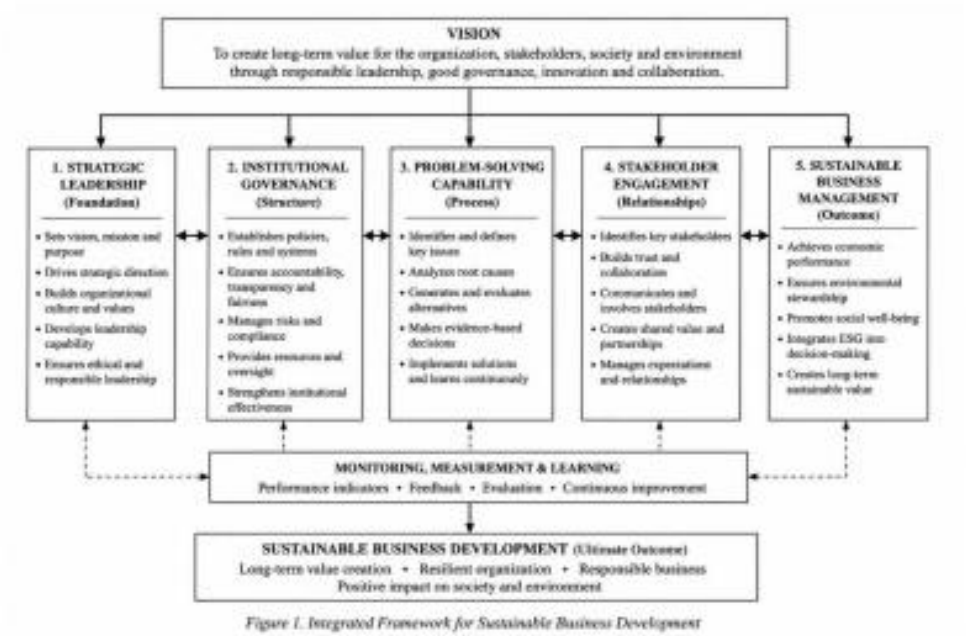


Figure 1. Integrated Framework for Sustainable Business Development

5.2 Component One: Strategic Leadership

Strategic Leadership serves as the foundation of the integrated framework. The key elements include:

• Vision and Direction: Establishing a clear long-term vision that motivates employees, aligns organisational objectives, and strengthens stakeholder confidence

• Technical Expertise: Leveraging operational knowledge and practical experience of

Master Mariners and Chief Engineers to build credibility and inform decision-making
• Cross-Cultural Competence: Engaging effectively with international clients and partners through cultural intelligence and language proficiency
• Professional Development: Commitment to continuous learning, professional qualifications, and leadership development
• Ethical Leadership: Demonstrating integrity, transparency, and accountability in all organisational activities
• Beyond Organisation Engagement: Contributing to industry development through professional associations and institutional collaboration

5.3 Component Two: Institutional Governance

Institutional Governance provides the framework for regulatory compliance, quality management, and organisational accountability. Key elements include:
• Regulatory Compliance: Meeting all requirements of the Department of Marine Administration, SRPS licensing, and international conventions
• Quality Management Systems: Implementing and maintaining ISO 9001:2015 quality management systems
• Organisational Structure: Establishing clear governance structures, defined responsibilities, and accountability mechanisms
• Documentation and Record Keeping: Maintaining comprehensive documentation of organisational activities, decisions, and outcomes
• Risk Management: Identifying, assessing, and managing regulatory, operational, reputational, and financial risks
• Performance Monitoring: Establishing systems for monitoring organisational performance, client satisfaction, and operational efficiency

5.4 Component Three: Problem-Solving Capability

Problem-Solving Capability enables organisations to identify challenges, diagnose root causes, develop solutions, and implement improvements. Key elements include:
• Problem Identification: Systematic processes for monitoring organisational performance and identifying emerging challenges
• Root Cause Analysis: Applying systematic approaches, including the "Five Whys" technique and cause-and-effect analysis
• Solution Development: Generating and evaluating alternative solutions based on evidence and stakeholder input
• Implementation: Executing solutions through clear implementation plans and assigned responsibilities
• Evaluation: Assessing outcomes and learning from experience
• Continuous Improvement: Applying lessons learned to improve future performance

5.5 Component Four: Stakeholder Engagement

Stakeholder Engagement encompasses processes for identifying, understanding, and engaging with diverse stakeholders. Key elements include:
• Stakeholder Identification: Identifying all stakeholders who can affect or are affected by organisational activities

• Stakeholder Analysis: Understanding stakeholder interests, expectations, and influence
• Communication: Maintaining active, transparent communication with all stakeholders
• Relationship Building: Developing and maintaining trust-based relationships
• Feedback Integration: Incorporating stakeholder feedback into decision making
• Conflict Resolution: Addressing conflicts through consultation, negotiation, and compromise

5.6 Component Five: Sustainable Business Management

Sustainable Business Management integrates economic performance, social responsibility, and environmental stewardship. Key elements include:

- Economic Performance: Maintaining profitability, operational efficiency, and longterm competitiveness
- Human Capital Development: Investing in employee development, leadership capability, and organisational learning
- Stakeholder Value Creation: Creating value for all stakeholders through fair treatment and responsible practices
- Environmental Responsibility: Compliance with environmental regulations and responsible resource management
- ESG Integration: Integrating Environmental, Social and Governance principles into strategic planning and operations - Social Contribution: Contributing to broader economic and social development

6. APPLICATION AND EVALUATION

6.1 Current State Assessment

Applying the framework to Toe Tet Too Company Limited reveals strong capabilities across all components:

Component	Rating	Evidence
Strategic Leadership	Strong	Master Mariners and Chief Engineers in leadership; ISO certification; cross-cultural competence
Institutional Governance	Strong	ISO 9001:2015; SRPS licensing; clear organisational structure
Problem-Solving Capability	Strong	Systematic problem identification; root cause analysis; continuous improvement
Stakeholder Engagement	Strong	Active communication with shipowners, seafarers, regulators, employees
Sustainable Business Management	Strong with Enhancement Opportunities	Economic performance; human capital development; ESG formalisation needed

6.2 Enhancement Opportunities

The analysis identifies five priority enhancement opportunities:

1. Digital Transformation: Investment in digital solutions for maritime operations, data analytics, and communication
2. ESG Integration: Formal ESG reporting, environmental management systems, and sustainability performance measurement

3. Leadership Succession: Structured succession planning frameworks and leadership development programmes
4. Knowledge Management: Systems for capturing, sharing, and applying organisational learning
5. Sustainability Reporting: Structured reporting frameworks aligned with international sustainability standards.

6.3 Implementation Roadmap

Phase	Duration	Key Activities	Deliverables
Phase 1: Assessment and Planning	Months 1-3	Comprehensive capability assessment; priority identification; detailed implementation plan	Assessment report; implementation plan
Phase 2: Capability Development	Months 4-12	Digital transformation; ESG integration; leadership succession; knowledge management	Implemented systems; enhanced capabilities
Phase 3: Integration and Embedding	Months 13-24	Strategic planning integration; decision-making integration; performance management integration	Embedded framework; organisational culture change
Phase 4: Review and Refinement	Ongoing	Annual reviews; stakeholder feedback; framework refinements	Continuous improvement; progress reports

6.4 Success Indicators
Success indicators for framework implementation include:
• Regulatory compliance maintained and improved
• ISO 9001:2015 certification maintained and enhanced
• Client satisfaction maintained or improved
• Seafarer recruitment and retention improved
• Employee engagement and development enhanced
• Stakeholder relationships strengthened
• Financial performance sustained or improved
• ESG performance improved
• Organisational reputation enhanced

7. DISCUSSION AND CONTRIBUTION
7.1 Theoretical Contributions
This publication makes several original contributions to theory in the fields of strategic leadership, organisational governance, and sustainable business development:
1. Integrated Framework: The development of an integrated framework that synthesises strategic leadership, institutional governance, problem-solving capability, stakeholder engagement, and sustainable business management into a coherent model represents an original contribution to knowledge.
2. Contextual Application: The application of the framework to the Myanmar maritime context provides valuable empirical evidence from an under-researched context, extending understanding of sustainable business development in emerging economies.
3. Theoretical Synthesis: The synthesis of multiple theoretical perspectives, including

Strategic Leadership Theory, Institutional Theory, Stakeholder Theory, and Sustainable Business Management, provides a more comprehensive understanding of sustainable business development than any individual perspective considered independently.

7.2 Practical Contributions

The publication also makes several original contributions to practice:

1. Practical Framework: The integrated framework provides a practical, actionable approach to sustainable business development that can be applied by maritime enterprises in Myanmar and other emerging economies.
2. Implementation Guidance: The implementation roadmap and success indicators provide practical guidance for organisations seeking to apply the framework.
3. Industry Benchmark: The framework provides a benchmark for sustainable business development in Myanmar's maritime crew management industry.
4. Professional Development: The framework contributes to professional development by articulating the capabilities required for sustainable business development.

7.3 Contribution to Sustainable Development

The framework contributes to sustainable development in Myanmar and the broader ASEAN region:

1. Economic Development: Enhancing capabilities of maritime enterprises, supporting business growth, and contributing to national economic development
2. Social Development: Promoting stakeholder engagement, human capital development, and social responsibility
3. Environmental Sustainability: Promoting compliance with environmental regulations and responsible resource management
4. ESG Integration: Articulating the importance of environmental, social, and governance considerations in business management

8. CONCLUSION AND RECOMMENDATIONS

8.1 Conclusions

This publication has presented an integrated framework for sustainable business development in Myanmar's maritime crew management industry. The framework synthesises strategic leadership insights and problem-solving frameworks within the context of Toe Tet Too Company Limited, demonstrating that sustainable business development requires the integration of five interconnected capabilities: Strategic Leadership, Institutional Governance, Problem-Solving Capability, Stakeholder Engagement, and Sustainable Business Management.

The case of Toe Tet Too Company Limited demonstrates how these capabilities can be integrated to create sustainable competitive advantage in Myanmar's maritime sector. The company demonstrates strong capabilities across all framework components, with enhancement opportunities in digital transformation, ESG integration, leadership succession, knowledge management, and sustainability reporting.

8.2 Recommendations

For Toe Tet Too Company Limited:

1. Enhance digital leadership capability and invest in digital transformation
2. Develop structured leadership succession planning
3. Formalise enterprise-wide risk management frameworks
4. Develop structured ESG reporting and environmental management systems
5. Invest in data analytics and knowledge management capabilities
6. Formalise stakeholder engagement frameworks

For the Myanmar Maritime Industry:
1. Collaborate through industry associations and knowledge-sharing initiatives
2. Invest in professional development through training and certification schemes
3. Integrate sustainability principles into business operations
4. Advocate for regulatory frameworks that encourage investment and innovation
For Policymakers:
1. Support maritime infrastructure investment and digital transformation
2. Invest in skills development through maritime education and training
3. Align Myanmar's regulatory framework with international standards
4. Address regulatory challenges and bureaucratic hurdles affecting maritime operations

8.3 Final Conclusion

Sustainable business development in Myanmar's maritime crew management industry requires the integration of strategic leadership, institutional governance, problem-solving capability, stakeholder engagement, and sustainable business management. The integrated framework developed through this research provides a comprehensive approach to achieving this integration, supporting the sustainable development of Toe Tet Too Company Limited and the broader Myanmar maritime industry. The publication contributes to both academic scholarship and professional practice, advancing understanding of sustainable business development in emerging economy maritime enterprises.

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PhD Title: The Role Of Human Capital Skills Portfolio In Accelerating Operational Performance: A Case Study Of Myanmar's Manufacturing SMEs A Thesis Submitted in Partial Fulfilment of the Requirements.

Tin Maung Htwe Doctor of Philosophy (by Publication)
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Abstract
This study investigates the relationship between human capital skills portfolio and operational performance of manufacturing small and medium-sized enterprises (SMEs) in Myanmar. A quantitative research approach was employed, and primary data were collected using self-reported questionnaire from
208 sample sizes (52 owners and managers, 156 team leaders and supervisors) from manufacturing SMEs. A purposive sampling method was used to select respondents with relevant experience and knowledge of operational processes. The collected data were analyzed through statistical techniques to examine relationship between human capital skills portfolio and operational performance. The findings indicated that technical skills, problem-solving, teamwork, and quality assurance skills demonstrate strong positive effect on operational efficiency and effectiveness. Communication skills and adaptability also show meaningful effect on operational contributions. The findings showed that the human capital skills portfolio impacts positively and significantly on manufacturing SMEs' operational performance. The findings contribute to SMEs owners, managers, and policymakers to provide training programs for increasing staff skills and workforce capabilities.
Keywords: Human Capital Skills Portfolio, Operational Performance, Manufacturing SMEs, Myanmar.

1. Introduction

1.1 Background of the study

In knowledge-driven and highly competitive business environment, firms increasingly rely on their human workforce for daily business activities and innovation, problem-solving and strategic decision-making (Erdei, 2021). Although the physical assets including infrastructures and financial capital are key drivers of business performance, businesses emphasize on human capital development to compete with technological advancement and globalization (Serenko et al., 2024). The concept of skills portfolio is important in human capital management as organizations face changing and complex market demands (Duha et al., 2025). Employee skills play a key role in promoting innovation and organizational growth. Employees with strong and diverse skills enable to generate new ideas, identify areas of improvement, and contribute to the development of new products and services (Vassiliadis & Hilpert, 2020). When organizations face constant changing in market conditions and customer demands, the qualified employees with variety of skills can adjust changes and support organizational transformation. Human capital skills are important in small and medium-sized enterprises (SMEs). SMEs play a vital role in economic development in both developed and developing countries, as they are the major source of employment creation and income generation (Zutshi et al., 2021). In developing countries, national government depend on SMEs to support economic growth and job opportunities (Gorondutse et al., 2020). Although SMEs are important for country's economic development, they face challenges such

as limited financial assets, inadequate human capital, and difficulties in accessing physical facilities. SMEs need to adopt effective managerial practices that enhance their performance.

In Myanmar, SMEs account for approximately 94% of registered enterprises are SMEs which are the key drivers of inclusive economic growth and job creation (Ministry of Information, 2024). Within Myanmar's SME sector, manufacturing enterprises hold a particularly significant positions in supporting industrialization and economic transformation. The manufacturing sector contributes to value-added production, job opportunities creation, and export development. Although manufacturing SMEs are important for local and export markets, they face several challenges that hinder their growth and operational performance. After 2019-COVID pandemic and political instability in 2021 cause high skilllabor migration, and consequently a labor shortage in business sectors. These crises significantly increase

the need for multi-skilled employees for firms, especially SMEs. To solve labor shortage issue, SMEs depend on employees who possess diverse and complementary skills to perform several business activities and responsibilities. However, SMEs struggle with insufficient technical skills, limited problemsolving capabilities, and inadequate managerial expertise among employees.

SME-related researches in Myanmar have examined on limited access to finance, inadequate infrastructure, and broad human resource challenge to evaluate business performance (Aung, 2024; Htun,

2025). There are few research studies exploring how human capital skills portfolio affect operational performance in the manufacturing sector. Thus, the impact of skills portfolio on operational performance

in manufacturing environment remains underexplored. To address this research gap, the current study investigates how human capital skills portfolio contribute to improving operational performance in Myanmar's manufacturing SMEs. By analyzing the relation between human capital skills portfolio and operational performance, the research generates the valuable insights for both theory and practice. The findings will support SMEs managers, owners, and other stakeholders to develop strategic decisions to strengthen workforce capabilities, and improve overall business competitiveness

1.2 Research Objectives

To examine the impact of human capital skills portfolio on operational performance in Myanmar's manufacturing SMEs. The specific objectives are:

1) To identify the key components of human capital skills portfolio among employees in manufacturing SMEs

2) To analyze the relationship between human capital skills portfolio and operational performance

3) To evaluate the impact of different skill dimensions on operational performance

2. Literature Review

2.1 Critical analysis of relevant theories

Human Capital Theory

The Human Capital Theory was developed by Gary Becker and Theodore Schultz in the early 1960s and later expanded (1994). According to Becker (1964), investment in formal and informal education is important to promote employee productivity (Millei, 2020). The Human Capital Theory shows that organizations generate value from physical assets, financial capital, and people's skills (Auerbach & Green, 2025). This theory highlights the vital aspects of having different skills and capabilities as the valuable organizational investments to achieve firms' objectives, and long-term successes. The theory points out education and training as investments, where individuals and firms expect improved performance, higher wages, and long-term economic benefits.

Resource-Based View (RBV)

The Resource-Based View (RBV) is recognized as a key theoretical framework for explaining how firms sustain long-term competitive advantage (Zahra, 2021). RVB describes that organizations achieve high performance by effectively managing valuable, rare, and inimitable resources, including human capital. Valuable resources allow businesses to implement strategies that enhance efficiency and effectiveness, thereby supporting organizational progress. Rare resources are not widely possessed by competitors, enabling firms to gain an advantage by executing unique value-creating strategies. Inimitable resources are those that competitors find difficult or impossible to replicate. These resources are supported by appropriate organizational structures that enable optimal utilization. RBV conceptually treats all resources similarly; however, human capital plays a particularly critical role (Gerhart & Feng, 2021). RBV provides a framework for evaluating how a firm's internal resources translate into capabilities, which in turn influence profitability and value creation

2.2 Human Capital Skills Portfolio

Human capital refers to the collective abilities, knowledge, skills, and experiences possessed by employees that contribute their performance, productivity and organizational values (Abdugafurova, 2024). It is a crucial intangible asset that enhances individual and organizational performance. Dar and Mishra (2021) also described the human capital as the multidimensional construct consisting of education, knowledge, experience and skills which are essential skills for firm development, especially in SMEs. Human capital portfolios emphasizes that person develops a mix of skills across different domains, rather than defining a single asset. Employees with highly specialized skills perform well when they change career, whereas the diversified skill set helps to adjust to shift in labor market demands by coping with uncertainty. Human capital portfolios influence both individual career success and economic factors such as productivity, workforce mobility, and income distribution.

(i) Technical skills

Technical skills of employees refer to the specific, job-related abilities and knowledge that individuals need to perform particular tasks effectively (Kusharjanto & Puterisari, 2025). These skills are measurable, teachable, and directly linked to the use of tools, technologies, methods and procedures. Technical skills are important as they directly influence how well employees can perform their jobs and contribute to organizational success. Technical expertise has become essential across almost all sectors as industries become more technology-driven.

(ii) Problem-solving skills

Problem-solving skills mean an employee's ability to identify issues, analyze situations, and develop effective solutions in a timely and logical manner (Middleton, 2020). Recognizing a problem, gathering relevant information, evaluating possible options, and implementing the appropriate actions are individual problem-solving skills. Employees with strong problem-solving skills can think critically, remain clam under pressure, and make informed decisions that lead to positive outcomes.

(iii) Communication skills

Communication skills refer to the ability of employees to convey information clearly and effectively, both verbally and non-verbally, in the workplace (Saxena et al., 2022). Effective communication is delivering messages and ensuring that the information is understood correctly by others. Firms with effective communication practices have higher productivity and employee engagement, as workers better understand their roles and responsibilities.

(iv) Digital skills

Digital skills mean the ability of employees to use digital technologies, tools and platforms effectively in the workplace (Nikou et al., 2022). Digital literacy and technological skills are the most indemand competencies in the world job market. Employees with strong digital skills can work faster, reduce errors, and contribute to innovation by using modern technologies effectively. Digital skills are essential to improve employability and career development.

(v) Adaptability

Adaptability means the employee's ability to adjust to new conditions, challenges, and changes in the workplace (Sony & Mekoth, 2022). Adaptable employees can respond effectively to unexpected problems, new technologies, and changing organizational goals. Adaptability helps employees remain effective and productive even in uncertain or changing situations. Adaptable employees learn new skills, take responsibilities, and innovate that improve their professional development and organization's competitive edge.

(vi) Teamwork skills

Teamwork skills are employees' abilities to work effectively and cooperatively with others to achieve common goals (Mobolade & Akinade, 2021). Teamwork is working alongside others, actively participating, supporting colleagues, and ensuring that team functions. Employees often need to work in teams to complete projects, solve problems, and meet organizational objectives. When teamwork is strong, tasks are completed more efficiently, and the quality of work improves. (vii) Quality assurance skills

Quality assurance skills are employees' abilities to ensure that products, services, and processes meet established standards and requirements (Santos et al., 2021). Employees with strong quality assurance skills understand procedures, following guidelines carefully, and use testing, and evaluation methods to maintain high standards. Quality assurance skills help organizations maintain high levels of performance and customer satisfaction.

(viii) Time management skills

Time management skills mean an employee's ability to plan, organize, and control how they spend time to complete tasks efficiently and meet deadlines (Boguslavska et al., 2025). Employees with strong time management skills can balance multiple responsibilities, complete work on time and maintain

productivity without unnecessary stress. Effective time management leads to higher work efficiency and job outcomes, as employees focus on important tasks and avoid wasting time.

2.3 Operational Performance

Operational performance improves firms' values through resource usage, and improving production processes. It maximizes productivity by using effectively the existing resources such as human, material, technological, and finance. Existing studies have consistently emphasized the importance of human capital in enhancing firm performance across different sectors and regions. Tran and Vo (2020) highlighted the sectorial variations in human capital efficiency and its impact on financial performance, while Alnoor (2020) demonstrated the significant role of human capital dimensions and social capital in promoting SME performance. Santa et al. (2022) and Roma (2022) concluded that human capital development impact on operational effectiveness, and success. Tushar and Sooraksa (2023) and Aglaonema et al. (2023) identified several employability, soft and hard skills. However, the previous studies focus on general human capital skills, and lack of examining how human capital skill portfolio impact on specific business sector, especially manufacturing sectors. Moreover, Mensah (2025) pointed out the impact of human capital on SME life cycles in developing and emerging economies, although, there is a lack of study in Myanmar. Thus, the current study aims to address the literature gap by

examining how human capital skills portfolio impact on operational performance of manufacturing SMEs
in Myanmar.

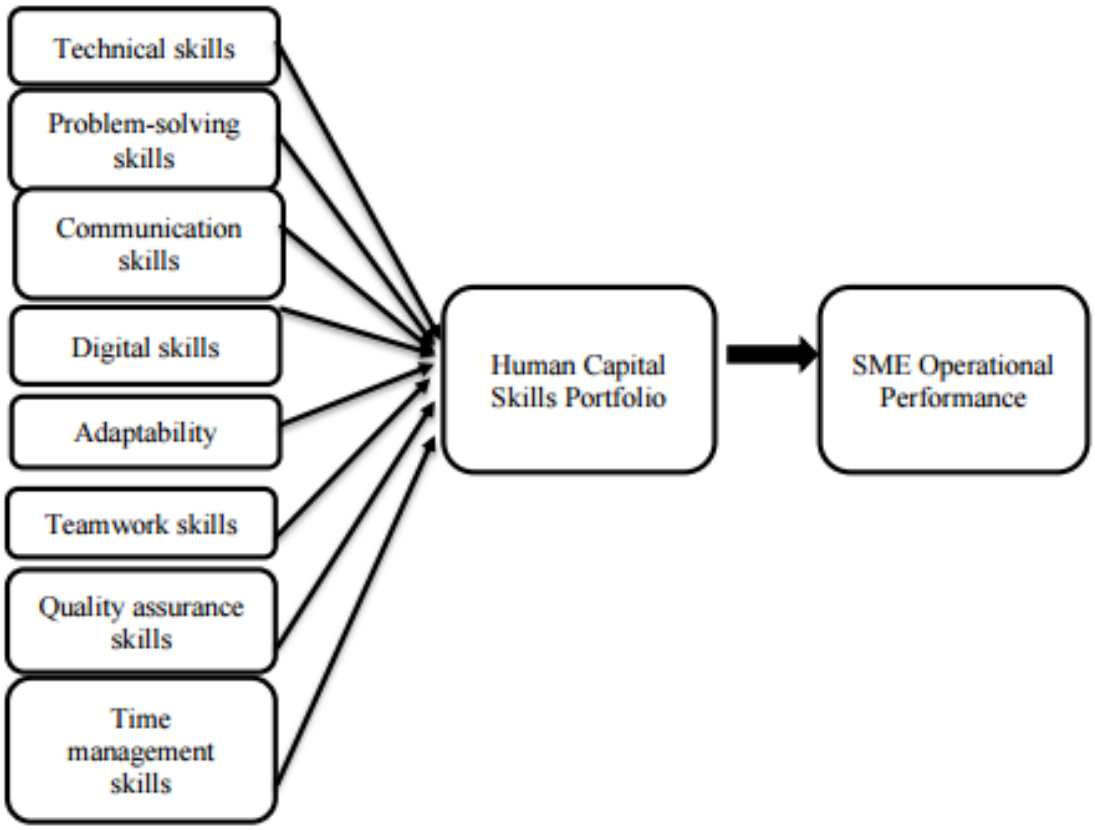


Figure 2-1: Conceptual framework *(Source: self-developed)*

3: Research Methodology

3.1 Research Design

This study applied deductive research approach to analyze impact of human capital skills portfolio on manufacturing SMEs operational performance. The deductive technique entails collecting and analyzing primary data from respondents to test the validity of hypotheses (Casula et al., 2021). The outcomes of the deductive technique demonstrate whether or not the prevailing ideas are accurate for current study fields and populations. Moreover, this study applied quantitative research design. The data are collected using questionnaire form and analyzed through statistical software. The quantitative study is
helpful to collect data from large sample using questionnaire data collection and analyze the collected data using statistical methods (Kittur, 2023). The findings can be interpreted through charts, and graphs. Moreover, the application of quantitative study is helpful to answer research questions though numerical
approach and find the correlation between variables.

3.2 Research Population, Sample size and Sampling method

This research targeted the manufacturing SMEs which has minimum ten years of operation period, and employ at least 30 employees at the time of study. The targeted manufacturing SMEs are textile and weaving sectors, water bottle manufacturers, food processing industries, garment

manufacturing industries, and footwear and bag manufacturing sectors. The current study targets the manufacturing SMEs' owners and managers who have main responsibilities and duties to manage the whole firm and have minimum ten years of experienced of management. Moreover, the research targets the team leaders and supervisors who play the critical role of daily business operations and have minimum three years of working experience in targeted SMEs. The team leaders and supervisors play an important role in SMEs' operations to manage the daily operations, communicate with stakeholders, and guide the team members to achieve the targeted goals. They require several skills and capabilities to manage business operations due to limited human resource in SMEs. However, there is lack of awareness how the team leaders, and supervisors' set of skills impacts on SMEs' operational performance, although they are key drivers of business.

This study targets 52 SMEs' owners and manager for operational performance, while a total of 156 team leaders and managers for human capital skills portfolio. To select the appropriate sample from population, this study uses the purposive sampling method for selecting SMEs' owners, managers, team leaders and supervisors. Purposive sampling is useful to select participants intentionally who have specific characteristics relevant to the study. Purposive sampling allows the researcher to select respondents who are directly involved in production processes and have the necessary knowledge and experience related to the study variables (Obilor, 2023).

3.3 Data collection methods and Data Analysis

Questionnaires were used to collect quantitative data from respondents. The questionnaire helped researchers obtain objectively measurable data, and allowed the collection of data from a large number of respondents in a relatively short time, so that the results can reflect the opinions and conditions of the wider population under study (Doran et al., 2026). The questionnaires are prepared into two sets: questionnaire for employers and managers, and questionnaire for team leaders and supervisors. Operational performance and human capital skills portfolio question items are prepared as the five-point Likert scale where the respondents must select the appropriate box that represent their perception and experience. Data are collected from geographically dispersed locations including Yangon, Mandalay, Naypyidaw and other major cities.

Before data collection, the researcher sent informed consent letter to targeted SMEs' owners and managers to get permission for data collection in their firms. After getting approval of data collection, the researcher distributed printed questionnaire to business owners, managers, team leaders and supervisors. Informed consents are obtained from all respondents, and participants are entirely voluntary. Respondents' personal data are confidential, and anonymous. The printed questionnaires are distributed to targeted SMEs, and collected data from SMEs' owners, managers, team leaders and supervisors. The returned data are transported into Microsoft Excel, and statistical software for further data analysis, and interpretation of results.

4: Findings and Discussions

4.1 Reliability Analysis

The reliability analysis (Cronbach's Alpha) is carried out to test the internal consistency of the measurement scales. The results presented in table (1) indicates that the constructs show excellent reliability. The Cronbach's alpha value for operational performance is 0.948, which exceeds the acceptable threshold of 0.7. Moreover, the human capital skills portfolio achieves the Cronbach's alpha score of 0.918. These values present that the items are reliable, and relevant for further data analysis.

Table 1: Reliability Analysis

Variable	Number of items	Cronbach's Alpha
Operational Performance	15	0.948
Human capital skills portfolio	40	0.918

(Source: Survey Data, 2026)

4.2 One-Way ANOVA

4.2.1 Comparison Test for Operational Performance Among Different Manufacturing SMEs

One-way ANOVA test is conducted to examine whether there are significant differences in operational performance among different types of manufacturing SMEs. The results presented in table (2)

shows the significant differences in operational performance across the different manufacturing SMEs (F=7.53, p-value < 0.01).

Table 2: One-Way ANOVA for Operational Performance Among Different Manufacturing SMEs

ANOVA					
Operational Performance					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.51	4.00	0.63	7.53	0.00
Within Groups	3.92	47.00	0.08		
Total	6.44	51.00			

(Source: Survey Data, 2026)

Following the significant One-way ANOVA results, a Tukey HSD post hoc test is conducted to identify which specific manufacturing industry groups differ in terms of operational performance (table 3). Garment manufacturing firms show significantly higher operational performance than textile and weaving firms (Mean difference = 0.65, p-value < 0.01). Moreover, garment manufacturing outperforms food processing firms (Mean difference = 0.39, p-value < 0.01). Footwear and bag manufacturing firms demonstrate significantly higher performance than textile and weaving firms (Mean difference = 0.51, pvalue < 0.01). The results indicate that textile and weaving firms consistently show significantly lower operational performance compared to garment manufacturing and footwear and bag manufacturing sectors.

Table 3: Multiple Comparisons for Operational Performance Among Different Manufacturing SMEs

Multiple Comparisons (Tukey HSD)						
(I) Industry		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Textile and Weaving	Water Bottle	-0.32	0.13	0.11	-0.69	0.05
	Food Processing	-0.26	0.13	0.28	-0.63	0.11
	Garment Manufacturing	-.64667*	0.13	0.00	-1.01	-0.28
	Footwear and Bag Manufacturing	-.51333*	0.12	0.00	-0.86	-0.16
Water Bottle	Textile and Weaving	0.32	0.13	0.11	-0.05	0.69
	Food Processing	0.06	0.13	0.99	-0.31	0.43
	Garment Manufacturing	-0.33	0.13	0.10	-0.69	0.04
	Footwear and Bag Manufacturing	-0.19	0.12	0.53	-0.54	0.16
Food Processing	Textile and Weaving	0.26	0.13	0.28	-0.11	0.63
	Water Bottle	-0.06	0.13	0.99	-0.43	0.31
	Garment Manufacturing	-.38667*	0.13	0.03	-0.75	-0.02
	Footwear and Bag Manufacturing	-0.25	0.12	0.26	-0.60	0.10
Garment Manufacturing	Textile and Weaving	.64667*	0.13	0.00	0.28	1.01
	Water Bottle	0.33	0.13	0.10	-0.04	0.69
	Food Processing	.38667*	0.13	0.03	0.02	0.75
	Footwear and Bag Manufacturing	0.13	0.12	0.82	-0.22	0.48
Footwear and Bag Manufacturing	Textile and Weaving	.51333*	0.12	0.00	0.16	0.86
	Water Bottle	0.19	0.12	0.53	-0.16	0.54
	Food Processing	0.25	0.12	0.26	-0.10	0.60
	Garment Manufacturing	-0.13	0.12	0.82	-0.48	0.22
*. The mean difference is significant at the 0.05 level.						

(Source: Survey Data, 2026)

4.2.2 Comparison Test for Human Capital Skills Portfolio Among Different Manufacturing SMEs

One-way ANOVA is conducted to determine whether there are statistically significant differences in the human capital skills portfolio across different manufacturing SME sectors. The results show that there are statistically significant human capital skills portfolio among the different manufacturing SMEs ($F = 5.49$, p-value < 0.01) (table 4).

Table 4: One-Way ANOVA for Human Capital Skills Portfolio Among Different Manufacturing SMEs

ANOVA					
Human capital skills portfolio					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.41	4.00	0.35	5.49	0.00
Within Groups	3.03	47.00	0.06		
Total	4.44	51.00			

(Source: Survey Data, 2026)

Following the significant One-way ANOVA results, a Tukey HSD post hoc test is conducted to identify specific differences in the human capital skills portfolio among manufacturing SME sectors. The results present that water bottle firms show significantly lower human capital skill levels compared to food processing firms (Mean difference = -0.355, p-value = 0.02). Moreover, water bottle firms have significantly lower skill portfolio than garment manufacturing firms (Mean difference = -0.42, p-value < 0.01). A significant difference is also observed between water bottle and footwear and bag manufacturing firms (Mean difference = -0.47, p-value < 0.01) (table 5).

Table 5: Multiple Comparisons for Human Capital Skills Portfolio Among Different Manufacturing SMEs

Multiple Comparisons						
					95% Confidence Interval	
(I) Industry		Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Textile and Weaving	Water Bottle	0.29	0.11	0.09	-0.03	0.61
	Food Processing	-0.06	0.11	0.98	-0.38	0.26
	Garment Manufacturing	-0.13	0.11	0.79	-0.45	0.19
	Footwear and Bag Manufacturing	-0.18	0.11	0.48	-0.49	0.13
Water Bottle	Textile and Weaving	-0.29	0.11	0.09	-0.61	0.03
	Food Processing	-.35500*	0.11	0.02	-0.68	-0.03
	Garment Manufacturing	-.42000*	0.11	0.00	-0.74	-0.10
	Footwear and Bag Manufacturing	-.47042*	0.11	0.00	-0.78	-0.16
Food Processing	Textile and Weaving	0.06	0.11	0.98	-0.26	0.38
	Water Bottle	.35500*	0.11	0.02	0.03	0.68
	Garment Manufacturing	-0.07	0.11	0.98	-0.39	0.26
	Footwear and Bag Manufacturing	-0.12	0.11	0.82	-0.42	0.19
Garment Manufacturing	Textile and Weaving	0.13	0.11	0.79	-0.19	0.45
	Water Bottle	.42000*	0.11	0.00	0.10	0.74
	Food Processing	0.07	0.11	0.98	-0.26	0.39
	Footwear and Bag Manufacturing	-0.05	0.11	0.99	-0.36	0.26
Footwear and Bag Manufacturing	Textile and Weaving	0.18	0.11	0.48	-0.13	0.49
	Water Bottle	.47042*	0.11	0.00	0.16	0.78
	Food Processing	0.12	0.11	0.82	-0.19	0.42
	Garment Manufacturing	0.05	0.11	0.99	-0.26	0.36
*. The mean difference is significant at the 0.05 level.						

(Source: Survey Data, 2026)

4.3 Pearson Correlation

4.3.1 Pearson Correlation between Human Capital Skills

The correlation matrix (table 6) shows the relationship between the skills portfolio and various individual skills, and relationships among the skills themselves. Most correlations are positive and statistically significant, indication that many of these skills improve together. Employees human capital skills portfolio has strong and statistically significant positive correlations with most skills. It is highly correlated with time management skills (r = 0.792), digital skills (r = 0.773), communication skills 9r = 0757), quality assurance skills (r = 0747), and technical skills (r = 0.745), significant at 0.01 level. There are also moderate positive relationships with problem-solving skills (r = 0.664), and adaptability (r = .596). However, the relationship with teamwork skills (r = 0.170) is weak and not statistically significant (p = 0.228).

Table 6: Pearson Correlation between Human Capital Skills

Pearson Correlation (r)										
		1	2	3	4	5	6	7	8	9
skills portfolio	r	1	.745**	.664**	.757**	.773**	.596**	0.170	.747**	.792**
Technical skills	r		1	.486**	.320*	.564**	.287*	0.066	.764**	.389**
Problem-solving skills	r			1	.293*	.528**	.630**	0.140	0.166	.501**
Communication skills	r				1	.571**	.444**	-0.050	.517**	.644**
Digital skills	r					1	.537**	-0.051	.470**	.439**
Adaptability	r						1	0.121	0.080	.296*
Teamwork skills	r							1	-0.009	0.127
Quality assurance skills	r								1	.675**
Time management skills	r									1
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

(Source: Survey Data, 2026)

4.3.2 Pearson Correlation between Human Capital Skills and Operational Performance

The correlation matrix (table 7) examines how operational performance is related to different skills. The results show that operational performance is moderately and statistically significant positive correlations with several skills. It is significantly related to quality assurance skills (r = 0.674), and time management skills (r = 0.636), at 0.05 significant level. Moreover, technical skills (r = 0.484), and communication skills (r = 0.484) show moderate positive correlations with operational performance, at the 0.05 significance level. However, some variables show weak and non-significant relationships with operational performance. These include problem-solving skills (r = 0.204), digital skills (r = 0.302), adaptability (r = 0.027), and teamwork skills (r = 0.079). The findings suggest that quality assurance and time management skills are the most critical drivers of operational performance, followed by technical and communication skills. However, problem-solving, digital skills, adaptability, and teamwork do not show a direct significant relationship with operational performance in this analysis.

Table 7: Pearson Correlation between Human Capital Skills and Operational Performance

		Pearson Correlation (r)								
		1	2	3	4	5	6	7	8	9
Operational performance	r	1	.484*	0.204	.484*	0.302	0.027	0.079	.674**	.636**
Technical skills	r		1	.486**	.320*	.564**	.287*	0.066	.764**	.389**
Problem-solving skills	r			1	.293*	.528**	.630**	0.140	0.166	.501**
Communication skills	r				1	.571**	.444**	-0.050	.517**	.644**
Digital skills	r					1	.537**	-0.051	.470**	.439**
Adaptability	r						1	0.121	0.080	.296*
Teamwork skills	r							1	-0.009	0.127
Quality assurance skills	r								1	.675**
Time management skills	r									1
*. Correlation is significant at the 0.05 level (2-tailed).										
**. Correlation is significant at the 0.01 level (2-tailed).										

(Source: Survey Data, 2026)

4.4 Regression Analysis

The simple linear regression test is carried out to examine the impact of human capital skills portfolio on operational performance of manufacturing SMEs. The regression results in table (8) indicates that the correlation coefficient (R = 0.556) shows a moderate positive relationship between the human capital skills portfolio and operational performance. The R2 value of 0.309 indicates that approximately 30.9% of the variation in operational performance can be explained by the human capital skills portfolio. The adjusted R2

(0.266) suggests that after accounting for sample size and model complexity, about

26.6% of the variance is still explained. The model is statistically significant (F = 7.165, p-value = 0.017). The unstandardized B coefficient presents the unit changes of dependent variable (operational performance) through the change of independent variable (human capital skills portfolio). According to unstandardized B coefficient (B = 0.674), when one unit increases in the skills portfolio, operational performance is expected to increase by 0.674 units. The standardized B coefficient (B = 0.556) indicates a moderate positive effect size, showing that the skills portfolio has a meaningful impact relative to standard deviations. The findings show that human capital skills portfolio is a significant predictor of operational performance (p-value = 0.017)

Table 8: Regression Analysis between Human capital skills portfolio and Operational Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.193	1.112		1.073	0.299
	Human capital skills portfolio	0.674	0.252	0.556	2.677	0.017
R		0.556				
R square		0.309				
Adjusted R Square		0.266				
F		7.165				
Sig.		0.017				
a. Dependent Variable: Operational Performance						
b. Predictors: (Constant), Human capital skills portfolio						

(Source: Survey Data, 2026)

4.5 Discussion

The findings show that these skills are generally well developed among team leaders and supervisors, with particularly high levels in teamwork, time management, and quality assurance. The concept of skills portfolio highlights the combination of diverse skills within employees. Existing study suggest that employees with multiple skills can improve flexibility, adaptability, and organizational productivity (Zutshi et al., 2021). The study confirmed that team leaders and supervisors in Myanmar's manufacturing SMEs possess a wide range of skills, including technical, communication, problemsolving, and time management skills. This supports the argument that multi-skilled employees are valuable assets, especially in SMEs.

The second objective examines how human capital skills portfolio influences operational performance. The results of this study support this perspective by demonstrating that human capital skill portfolio has a positive and statistically significant relationship with operational performance. This aligns with prior studies including Tran and Vo (2020), and Alnoor (2020) which confirm that human capital contributes directly to firm performance across various sectors. Santa et al. (2022) and Roma (2022) also pointed the crucial impact of human capital skills on organizational performance.

The final objective identifies the specific skill dimensions have the strongest impact on operational performance. The findings present that quality assurance, and time management skills have the most significant positive relationships with operational performance, while teamwork, adaptability, and problem-solving skills have weak impact on SMEs' operational performance. However, previous researchers (Tushar & Sooraksa, 2023) mentioned that teamwork, adaptability, and problem-solving skills enhance operational performance. Aglaonema et al. (2023) also concluded that technical skills are important for operational performance among manufacturing sectors. In production-oriental industries, quality assurance, time management, technical and communication skills are critical drivers of operational performance.

The current findings support that human capital skills significantly influence operational performance. The current study supports the existing Resource-Based View (RBV) theory, which identifies human capital as a strategic resource that generate competitive advantage with effective utilization of human resources. Previous studies described that SMEs depend on internal resources such as human capital (Gerhart & Feng, 2021). The current study contributes to the limited body of knowledge on SMEs in developing context, such as Myanmar. The results confirm the importance of human capital in driving organizational performance and support key theoretical framework such as RBV.

5: Conclusion and Recommendations

This study contributes to existing literature on human capital skills portfolio, and operational performance, within the context of manufacturing SMEs in developing economies. The study contributes to Human capital theory by focusing on individual skills and competencies. The current study focused on multi-dimensional skills portfolio instead of single skill or competency. The combination of technical, soft and managerial skills collectively influences operational performance. The study also enhances the Resource-Based View (RBV) by providing empirical evidence that human capital skills portfolio functions as strategic organizational resources. This contribution highlights that the value of resources depends on their alignment with operational needs and their effective utilization. The research also contributes to the human capital skills portfolio literature, which remains relatively underdeveloped compared to general human capital studies. The study also provides the contextual contribution by applying these theoretical frameworks within Myanmar's manufacturing SMEs. Existing literatures have examined on developed economies, and this study filled the existing research gap.

Based on findings of this study, several strategic and practical recommendations are proposed to enhance the effectiveness of human capital skills portfolio and improve operational performance in Myanmar's manufacturing SMEs. SMEs Should focus on aligning human capital development with business objectives. Managers should integrate the quality assurance and time management skills into their long-term business strategies, ensuring that workforce development supports productivity, efficiency, and quality improvement goals. SMEs should adopt a skills portfolio management approach. Instead of treating skills independently, organizations should manage employee capabilities as a combination of complementary competencies. Managers and owners should identify the most valuable skills combinations required for specific operational roles and designing targeted training programs to achieve qualified and effective workforce that support operational efficiency and adaptability.

At the practical level, managers and owners should implement targeted training and development programs focusing on key performance-driving skills. Training programs should emphasize quality control techniques, time management practices, and technical competencies that directly influence operational outcomes. Managers should create opportunities for employees to apply different skills such as digital and teamwork skills in their daily tasks. SMEs should implement performance measurement systems that link employee skills to operational outcomes. Key performance indicators (KPIs) related to productivity, quality, and efficiency should be regularly monitored. Future studies should expand the scope of human capital skills portfolio by including additional dimensions such as leadership skills,

financial management skills, and strategic decision-making capabilities.

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Green Transformation of Georgia's Financial Sector at the Current Stage

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Abstract

This article examines the current state of the green transformation of Georgia's financial sector — the evolution of its regulatory framework, the dynamics and sectoral structure of green lending, the development of the sustainable (green) bond market, and the involvement of commercial banks in implementing ESG principles. The study draws on official reports and published statistics of the National Bank of Georgia (NBG, 2022, 2025), as well as analytical publications from independent research institutions and international financial organizations (PMC Research Center, 2024; Swisscontact, 2024; EBRD GEFF Georgia, 2023). It presents the growth dynamics of the green loan portfolio in 2023–2024, its sectoral distribution — dominated by renewable energy — and the changing level of Taxonomy alignment across the banking sector. The concluding section offers recommendations for further deepening the green finance market and better integrating sustainable development goals into the Georgian banking system.

Keywords: green finance, sustainable development, National Bank of Georgia, ESG, green bonds, financial sector.

Introduction

Climate change and the challenges of sustainable development have become one of the principal drivers of financial-system transformation at the current stage. Central banks and financial regulators worldwide are increasingly building frameworks designed to redirect capital flows toward green and socially responsible

projects. Georgia, as an emerging-market economy, has in recent years steadily developed the institutional and regulatory foundations of sustainable finance.

The National Bank of Georgia (NBG) has implemented a Sustainable Finance Roadmap since 2019, setting out a phased plan for the green transformation of the country's financial sector — from raising awareness and developing a taxonomy to managing ESG risks and strengthening market discipline (NBG, 2019, as cited in Green Finance Platform, n.d.). This process accelerated markedly between 2022 and 2025, when the Sustainable Finance Taxonomy was developed, the corresponding reporting regulation entered into force, and the institutional groundwork for a market in green, social, and sustainability bonds began to take shape (NBG, 2022; NBG, 2025).

The purpose of this article is to provide a systematic analysis of the current state of the green transformation of Georgia's financial sector, based on an assessment of the evolution of the regulatory framework, the quantitative dynamics of green lending, its sectoral structure, and the level of banking-sector engagement, and to identify the existing challenges and future development prospects.

Methodology. The study is based on secondary data analysis, drawing primarily on official statistical publications of the National Bank of Georgia (annual Sustainable Finance Status Reports, financial sector reviews, and the public green loan data dashboard), as well as analytical reports from independent research and international financial organizations. Descriptive statistical and comparative analysis methods were applied to assess time-series dynamics, sectoral structure, and the level of institutional engagement. The data are visualized through tables and diagrams to more clearly illustrate underlying trends.

Evolution of the Regulatory Framework. Georgia's institutional framework for sustainable finance has developed in stages since 2019. Table 1 presents the main milestones.

Notably, the second Roadmap (2025–2028) builds on the achievements of the first phase and is organized into two groups of pillars — core and supporting. The core pillars include integrating ESG considerations, including climate- and nature-related risks, into financial institutions' risk-assessment processes; improving transparency and reporting quality; and aligning the NBG's own internal operations with sustainability principles (NBG, 2025).

Date	Event / Document	Content
2019, April	First Sustainable Finance Roadmap (2019–2024)	A four-pillar strategic document developed with IFC support
2020, February	ESG Disclosure and Reporting Principles	A framework for public ESG disclosure by the banking sector
2022, August	Sustainable Finance Taxonomy (SF Taxonomy)	A unified classification system for green, social, and sustainable loans

2023, January	Regulation on Loan Classification and Reporting under the Taxonomy	Banks required to submit monthly reports on Taxonomy-aligned green loans
2025	Second Sustainable Finance Roadmap (2025–2028)	An expanded six-pillar framework, including nature-related risk issues
2025, August	Presidential Decree No. 197/04 on GSS+ bonds	A 2.5 percentage-point reduction in the collateral valuation haircut for green/social/sustainability/sustainability-linked bonds in NBG refinancing operations

Table 1. Key milestones of Georgia's sustainable finance regulatory framework, 2019–2025 (Source: author's compilation based on National Bank of Georgia data; NBG, 2022, 2025; Green Finance Platform, n.d.).

Analysis of Green Lending Dynamics. The volume of Taxonomy-aligned green loans grew sharply over the course of 2023. Whereas the green loan portfolio stood at approximately GEL 412 million as of September 2023, it had risen to GEL 881 million by the end of the year (PMC Research Center, 2024; EBRD GEFF Georgia, 2023). Despite this dynamic growth, the share of green loans in the total credit portfolio remains below 1%, indicating that the market is still at an early stage of development.

For context, the total loan portfolio of Georgia's commercial banks stood at GEL 50.1 billion as of January 2024, and had reached GEL 63 billion by the first quarter of 2025 — a year-on-year increase of 16.6% (BTU AI, 2025). By June 2026, the total banking-sector portfolio had grown to GEL 73.4 billion (Georgian Business Consulting, 2026).

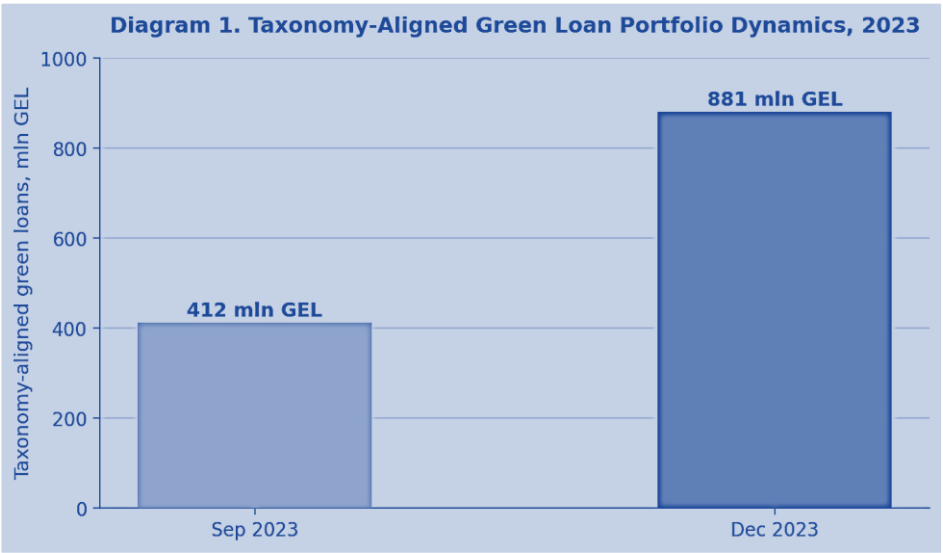


Diagram 1. Dynamics of the Taxonomy-aligned green loan portfolio, 2023 (mln GEL). Source: PMC Research Center (2024); EBRD GEFF Georgia (2023).

Relative to the overall growth rate of the banking sector, the development of the green segment lags significantly behind, pointing to considerable potential for its share to expand further.

A similar pattern is observed at the level of individual banks: for example, the green portfolio of Bank of Georgia stood at GEL 875 million in 2023, representing only 3.7% of the bank's total loan portfolio (Swisscontact, 2024).

Sectoral Structure of Green Loans. A sectoral analysis of green lending reveals sharp concentration in renewable energy. According to 2023 data, 63% of green loans were directed to renewable energy, of which 57 percentage points specifically related to hydropower projects. The second most significant category was green transport, at 17%, while the remaining sectors — energy efficiency, sustainable water management, and others — together accounted for roughly 20% (UN Global Compact Network Georgia, 2024).

This structure illustrates that Georgia's green finance market is currently concentrated on a relatively narrow sectoral base. On the one hand, it reflects active development of the country's hydropower potential; on the other, it points to the need for diversification into areas such as sustainable agriculture, water and waste management, energy-efficient construction, and innovative green-technology sectors.

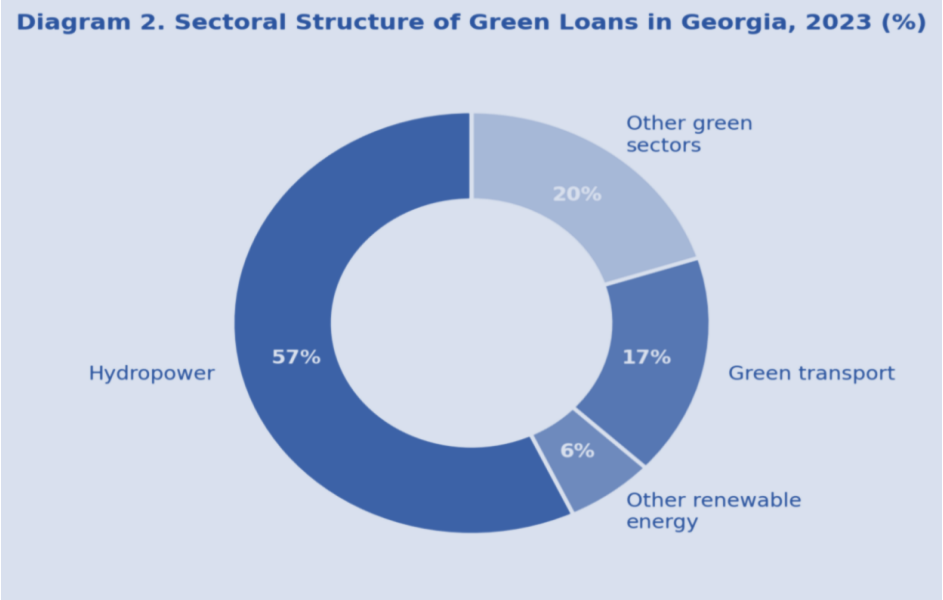


Diagram 2. Sectoral structure of green loans in Georgia, 2023 (%). Source: based on data from UN Global Compact Network Georgia (2024).

Banking-Sector Engagement and ESG Reporting. Georgia currently has 17 licensed commercial banks. Data on Taxonomy-aligned green loans were submitted by only 7 banks in 2023; by 2024, this number had risen to 9 (National Bank of Georgia, n.d.). From 2025 onward, reporting only fully Taxonomy-aligned data in

ESG forms has become mandatory, which is expected to improve the comparability and quality of the underlying data (NBG, 2025).

Since 2021, the National Bank of Georgia has published an annual Sustainable Finance Status Report summarizing qualitative and quantitative data collected through ESG forms — ranging from the environmental structure of the credit portfolio to gender balance and the age structure of employees. Despite progress in recent years, the NBG notes that the level of ESG-practice implementation varies considerably across institutions: some banks are advanced, while others remain at an early stage (NBG, 2025).

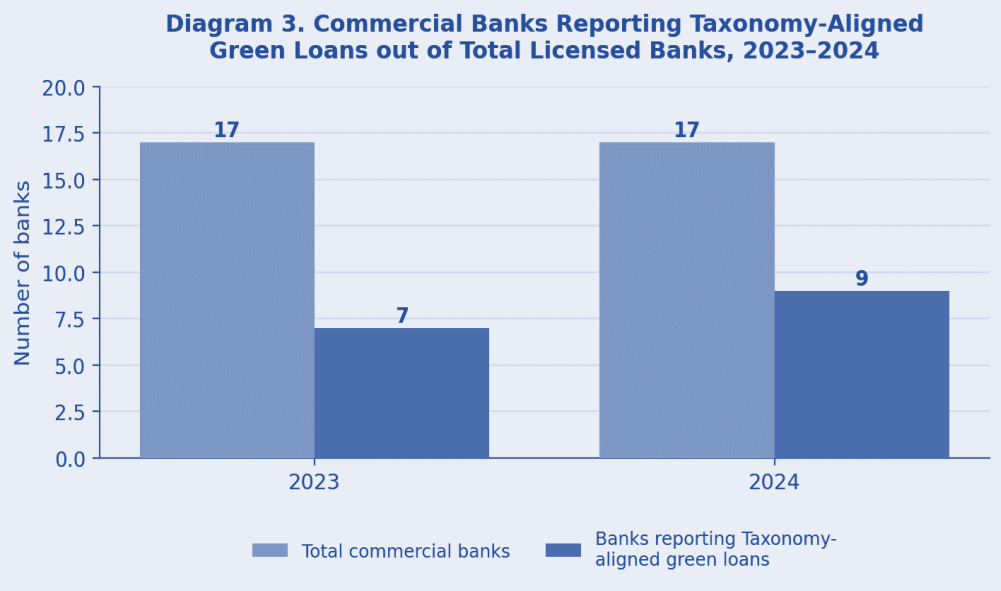


Diagram 3. Number of banks reporting Taxonomy-aligned green loans out of 17 licensed commercial banks, 2023–2024. Source: National Bank of Georgia (2025).

Development of the Sustainable (Green) Bond Market. Alongside bank lending, a market for sustainable corporate bonds is gradually taking shape in Georgia. In April 2023, GeoSteel placed the country's first two-year, USD 15 million sustainability-linked bond — the first such instrument in Georgia's heavy-industry sector, aimed at cleaning up the steel-production process and achieving a 75% reduction in gas consumption (PMC Research Center, 2024). Similarly, Tegeta Holding issued a GEL 150 million corporate bond and an additional USD 25 million bond for individual investors, targeting a 55% reduction in car emissions and a 50% reduction in van emissions by 2030, and zero-emission new vehicles by 2035 (PMC Research Center, 2024).

To reinforce these trends, in August 2025 the National Bank of Georgia approved a regulation on the granting, maintenance, and revocation of Green, Social, Sustainability, and Sustainability-Linked (GSS+) bond status. Under this regulation, such bonds benefit from a 2.5 percentage-point reduction in the collateral

valuation haircut applied in the NBG's refinancing, open-market, and intraday lending operations — a concrete monetary incentive for the development of the sustainable-instruments market (NBG, 2025).

Key Challenges: A low share of green loans in the total credit portfolio (below 1%), indicating a still-limited impact on the real economy; Sectoral concentration in renewable energy, particularly hydropower, with limited diversification into other sustainable areas; Uneven engagement among commercial banks — fewer than half of the 17 licensed banks currently produce regular Taxonomy-aligned reporting; An early-stage capital market — the sustainable bond market remains limited to a handful of pilot transactions; A deficit of awareness and technical capacity among both financial institutions and small and medium-sized enterprises, constraining both the supply of and demand for green financial products.

Conclusions

The analysis shows that Georgia's financial sector has undergone significant institutional and regulatory progress toward sustainable (green) finance over the past five years. The taxonomy developed by the National Bank of Georgia, the accompanying reporting regulation, and the phased Sustainable Finance Roadmaps provide a solid institutional foundation for the market's continued development.

At the same time, the quantitative indicators show that the green transformation remains at an early stage: the share of green loans in the total portfolio is minimal, the sectoral structure is concentrated in a handful of areas, and the level of engagement among commercial banks is uneven. The sustainable bond market, too, despite encouraging regulatory changes — including the 2025 GSS+ regulation — remains largely at the pilot stage.

It can therefore be concluded that the green transformation of Georgia's financial sector has been successfully launched from an institutional and regulatory standpoint, but translating it into meaningful real-economy impact — in terms of scale, sectoral diversification, and deeper market integration — remains a task for the years ahead.

Recommendations

1. Strengthen incentive mechanisms (tax benefits, preferential collateral terms, guarantee schemes) to increase the volume of green lending and broaden bank participation.
2. Support sectoral diversification of the green portfolio — particularly toward energy efficiency, sustainable agriculture, and water and waste management — to reduce dependence on hydropower.
3. Expand technical assistance and awareness-raising programs for small and mid-sized banks and microfinance institutions to increase the number of institutions producing Taxonomy-aligned reporting.

4. Deepen the sustainable bond market through additional monetary and regulatory incentives, a broader investor base, and greater awareness among corporate issuers.

5. Develop climate- and nature-related scenario analysis and stress-testing methodologies within the financial stability supervisory framework, in line with the directions set out in the second Roadmap (2025–2028).

6. Improve the availability and transparency of public data, including further development of the green loan data dashboard, to support research and strengthen market discipline.

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Georgia in the Context of Global Challenges

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Abstract

Georgia is part of a large world family, which is also evidenced by our geopolitical location, as we are constantly a subject of interest between Europe and Asia. Accordingly, the country is fully involved in the rhythm of life, where economics, politics, culture and all other spheres influence everyday life. Georgia is located at the junction of two large continents, as if connecting them and, at the same time, dividing them. Strangely enough, it is both a connecting and a dividing force, two powerful regions consisting of many states, which carries with it its own responsibility and influence. We are an independent state, but we always remain the object of attention, which is why we face many challenges. We constantly fight to maintain this independence, even when we are free. However, Georgia was, is and will be a state that will not give up its dignity and values, because the main goal is development, peace and coexistence with the world, where obstacles and challenges will be easily overcome. Being part of the world means participating in the progress or threats that other countries are experiencing. The topic of our paper also concerns this very issue - what global challenges the world faces and what their impact is on the Georgian economy.

Keywords: Challenge, Economy, Globalization, Security, World.

Introduction

The modern world faces many problems, because there are many states, they have diverse environments, financial systems, political situations, economic conditions and other factors. Accordingly, climate change, ensuring the stability of the financial sector, easing political tensions, slowing economic growth and similar obstacles require active and constant involvement of countries in solving the issue, because if there is a problem for one state, it may spread, therefore the goal of world coexistence is to ensure joint activities so that the obstacle can be eliminated in a timely manner.

If we recall the biggest challenge of recent years, we will probably all remember the COVID19 pandemic, which has faced the world with a completely new reality and dictated a change in lifestyle. It literally stopped the daily routine, plans and active pace, the Earth "paused" in the world. Fear arose - what will happen tomorrow? It was a global war, which began in December 2019 in Wuhan, one of the cities of China, and gradually continued in different countries. It sounds strange, doesn't war imply armed conflict and destruction? No, it was really a war, for survival, for life, for people, for unity, for the stability of the

state. Yes, the area of spread was so large and the statistics were so high that it became virtually impossible to control the virus. On January 30, 2020, the World Health Organization officially confirmed the start of the coronavirus epidemic and strictly warned the public about the high-risk threat, and on March 11, 2020, the coronavirus became a global pandemic. No one thought in the 21st century, when we are literally considering living on the moon, building houses on Mars, that the virus would throw the system we have been building for years into the most difficult situation. What seemed like a simple problem turned into the most difficult challenge, first of all because of human lives, and then the difficult reality appeared, which disrupted all sectors. The economy took a severe hit, as all countries closed their borders, which killed tourism, delayed transport relations, and canceled cultural events. Here, as it were, the whole world faced a new reality - a struggle for survival while maintaining distance. Everything moved to the digital space, educational processes, food facilities were closed and only delivery services existed, cinemas were suspended for an indefinite period. If we look at the global film industry, there is actually so little activity during the pandemic that history probably does not remember anything like it. The number of infected people reached 776 million people, which claimed the lives of 7 million people. The pandemic not only worsened the economic or cultural situation, but also affected the main value - human life. The road to a vaccine turned out to be long and quite difficult, but on May 5, 2023, the World Health Organization announced the end of the pandemic, thus closing another page in history. The consequences were very severe, as most countries lost people, income, and in many places the economy had to be revived. Everything from virtual reality returned to the real space. Coronavirus has taught us that health is priceless, that we need a strong healthcare system, continuous learning and development, support for research, and a contingency plan in case similar cases arise.

Main part

COVID19 is just a small example of the challenges that each country faces on a daily basis. That is why every year, the World Economic Forum discusses all issues that pose a risk to states on a global scale. According to the 2026 report, we can highlight several important problems that Georgia, as part of the global space, also faces:

1. **Geoeconomic confrontation,** which is a kind of leading risk, because economic blockades, export restrictions and many other factors influence the economic situation of the world's countries in order to gain an advantage. At the same time, geoeconomic confrontation divides the world into technological and economic spheres of influence, which is why not efficiency and price, but political reliability come to the fore, which ultimately increases production costs and hinders or simply hinders global innovations. It is worth noting that traditional and influential international institutions (the United Nations, the World

Trade Organization, etc.) are weakening, which increases the risk of escalating conflicts, since there will no longer be a body that will establish rules.

2. **Disinformation, false information and negative effects of artificial intelligence:** Social networks are saturated with fake news, which is the result of the development of artificial intelligence (AI). It has become so sophisticated and at the same time accessible that the line between reality and fiction has literally been blurred, which poses a risk of disinformation of the population, for some manipulation and sowing chaos in society. That is why it is necessary to clearly outline the limits of the use of artificial intelligence, to determine its positive and negative sides. We believe that in the near future mass automation of workplaces will begin, as a result of which part of the population will simply be left without work. Among the risks is the loss of control over autonomous systems important for countries, as a result of which power may go beyond state control.

3. **Food security,** which is a pressing issue as the population is growing rapidly, is expected to reach 9 billion by 2050, creating food security challenges and demand will increase by approximately 60%, which is quite a large number. Added to this are the Third World countries, where hunger and water shortages are already a natural phenomenon. That is why most states are obliged to promote and stimulate agriculture so that the population becomes interested in rural life and activities in the agricultural sector. Both businesses and ordinary citizens need to be interested in rural development, as it is one of the sources of the country's growth. For example, based on the 2024 census of the National Statistics Service of Georgia, the population was 3,929,581, of which 3,304,075 are Georgians, while the largest ethnic groups are Azerbaijanis and Armenians. [47]Up to 63% of the total population lives in urban settlements, the largest of which is in the capital Tbilisi, which once again indicates the need to interest the population in rural areas. However, Georgia is actively promoting agribusiness through programs such as preferential agri-credit, agri-insurance system, co-financing, etc. Agriculture is indeed interesting, but statistics also show that the population flow from rural to urban areas has increased, which is leading to the emptying of villages.

4. **Economic growth and global inequality,** which includes economic and social inequality that divides society into rich and poor. In fact, there is a middle class, but in very small numbers. Inflation, high interest rates and climate change hit the poorest and developing countries the hardest, which can ultimately lead to serious civil unrest and migration crises in the long term. However, against the background of all this, the rich are getting richer, while other segments of society suffer from inflationary processes or the impact of hostilities. It is assumed that the price of food products and primary consumer

[47] The statistical information provided in the article is based on official data from the National Statistics Service of Georgia (www.geostat.ge)

goods will continue to rise, which will certainly harm the population of developing countries. At the same time, global inequality is also growing, which means an increase in the number of violations of gender equality, discrimination on the basis of sex, and violations of women's rights, because men are often paid more than women for the same job and position, which is actually the case in Georgia. According to the latest data from the National Statistics Service of Georgia, the average salary of men is 2,400 GEL, and that of women is 1,600, which is a clear example of how much work Georgia has to do in this area. Unfortunately, the idea that women are paid less is still relevant all over the world. However, we should not forget about those countries where women are generally prohibited from social activities, work, and even education.

5. **The employment problem** is so urgent because it is caused by many factors. For example, during COVID19, the unemployment rate has increased significantly throughout the world, as the world has literally "paused", which has been a challenge for each country, including states that are at a fairly high level of development. If during the global economic crisis of 2008, 200 million people remained unemployed, during the pandemic, 33 million people in the US registered a claim for unemployment insurance with the Bureau of Statistics in just a few weeks. The world's population is growing rapidly, which adds to the need for jobs, and this is a real problem for states, because if appropriate jobs cannot be provided, people will not be able to live a decent life, the poverty level will increase, and the number of socially vulnerable people will increase. However, it is interesting that in most countries, employers are experiencing a greater shortage of qualified personnel and the labor market cannot find the necessary resources. There are two sides to the coin, therefore, in the example of Georgia, employers often have requirements that are out of touch with reality, and job seekers are not interested in a specific vacancy due to low wages, working hours, or other reasons. In the example of our country, if in 2010 the unemployment rate was 27.2%, today in 2026 it is 14.4%, which indicates the fact that the state is actively concerned about creating jobs.

6. **Climate change,** which overshadows all other problems so much that if the climate and natural environment change, all challenges will be left aside and there will be no time to think. Let's observe how the boundaries between seasons have been lost, in fact there is only summer or winter, earthquakes, droughts, storms, rain, hail, etc. have become more frequent. All this negatively affects agriculture and our quality of life, because countries that depend on imported products are becoming more expensive.

7. **Increased population and limited resources.** We have noted that the population is growing, which is accompanied by limited resources. Today, 7 billion people live in the world, although it is estimated that 11 billion people will live by 2100. Such an increase is logical, because technological development and improvement in living standards should lead to an increase in life expectancy. But if we think about

it realistically, population growth will lead to an increase in demand for resources, such as: food, housing, electricity, etc. Resources, in many cases, are limited and may disappear from nature, for example, water, gas, oil, etc. Georgia is a country rich in natural resources, therefore, with reasonable use, it can easily become a source of income for the economy, because there are many countries in the world that do not have potable water or it is polluted for various reasons.

Gas is also a widely used resource and is not renewable, which means that at some point it will reach its lower limit and it will be necessary to find a replacement. In the 21st century, 187,000 cubic kilometers of gas are available, the main owners of which are Iran, Russia, Qatar, the USA and Turkmenistan. However, based on the trend of natural gas consumption, it is assumed that this resource will last the Earth for at least 50 years. But the question arises, what will happen next? What can replace this resource?

Oil is also one of the massively used resources in the world, after the depletion of which any country will face a really big problem, because we use more than 1 million barrels annually, which means that by 2050, if we do not have an alternative, oil reserves will also run out. With current trends, the price of fuel is constantly changing, mostly increasing, both in Georgia and around the world. This shows that we need to be careful about limited resources and at the same time think about alternative substitutes.

Conclusion

Georgia is part of the world, so current events, problems, challenges and various factors always affect us and often, more sharply, affect our country. The strategic location does not give us any other choice, as neighboring states live, it is reflected in us and has a great impact on both economic and cultural life. It is impossible to avoid situations that are everywhere, but we can reduce the negative consequences. We think that Georgia has great prospects for development in many directions. Globalization, in this process, helps us, as it were, to remove borders between states and move towards a common goal. The common goal is peace, a world where the population will live happily.

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Teaching methods that promote the development of critical and analytical thinking: theoretical and practical analysis

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Abstract

One of the main challenges of the education system today is to create a learning environment that not only provides students with knowledge, but also develops their critical and analytical thinking, problem-solving, argumentative reasoning and decision-making skills. Modern international frameworks, including the OECD Learning Compass 2030, UNESCO's Education Vision and the World Economic Forum's Future Skills Model, emphasize that it is precisely these competencies that determine the competitiveness of both the individual and society.

The aim of this article is to provide a theoretical and practical analysis of teaching methods that promote the development of critical and analytical thinking, review international experience, assess the educational reality of Georgia and identify existing challenges. The study is based on an analysis of modern scientific literature, reports of international organizations, national educational documents and OECD PISA 2022 data for Georgia.

The results of the study show that critical and analytical thinking is most effectively developed through the use of active teaching methods such as problem-based learning, project-based learning, case analysis, Socratic dialogue, debate, inquiry-based learning, collaborative learning, and reflective practice. International experience shows that these methods are systematically integrated into the educational systems of countries such as Finland, Estonia, Canada, and Singapore, where high academic achievements of students are associated with the development of high-level thinking skills. The data discussed on the example of Georgia indicate that despite the national curriculum, which envisages competency-based education, the dominance of reproductive teaching elements is still observed in teaching practice, which is partially reflected in the results of PISA 2022. This circumstance highlights the need for a systematic renewal of teaching methods, strengthening of teachers' professional development and transformation of assessment practices.

The article argues that the development of critical and analytical thinking should not be considered as the result of using a separate method, but as a process of systemic transformation of the learning-teaching culture, which includes the learning environment, assessment, pedagogical approaches and institutional support.

Keywords: critical thinking, analytical thinking, active learning, problem-based learning, project-based learning, 21st century skills.

Introduction

Amidst the digital transformation, rapid development of artificial intelligence, mass dissemination of information and changes in the labor market, the purpose of education has changed significantly. While traditional educational models were mainly focused on the transfer of knowledge and memorization of information, modern education systems are increasingly trying to develop competencies that will allow an individual to think independently in a rapidly changing environment, evaluate information, analyze problems, make informed decisions and create new knowledge. That is why critical and analytical thinking is considered one of the most important skills of the 21st century.

International organizations unanimously note that the economy of the future is no longer based only on the possession of information, but also on its understanding, evaluation and creative use. Accordingly, the quality of modern education is increasingly assessed not only by academic achievements, but also by the extent to which the educational system manages to form high-level thinking skills in students.

In recent years, reforms of the education system in Georgia have been actively focused on the introduction of competency-based learning. The national curriculum pays special attention to the development of critical thinking, problem solving, collaboration and creative thinking. Nevertheless, the results of international studies, especially the results of OECD PISA 2022, indicate that a significant part of Georgian students still fail to reach the level of thinking necessary for success in the modern knowledge economy. This circumstance raises the question of how effectively teaching methods that actually contribute to the development of critical and analytical thinking are being implemented.

The problem is especially relevant given that the modern educational process is still often focused on teaching information reproduction, while the development of high-level cognitive skills requires active student involvement, analysis of problem situations, argumentative reasoning, collaborative learning and reflection. Accordingly, research into teaching methods that serve not only the transfer of knowledge but also the development of thinking is of particular importance.

The aim of this article is to provide a theoretical and practical analysis of teaching methods that promote the development of critical and analytical thinking, to assess international experience, to discuss Georgian educational practice, and to identify existing challenges. The article is also based on an analysis of OECD PISA 2022 data for Georgia, which allows theoretical reasoning to be reinforced with empirical evidence.

Literature Review

In the modern education system, critical and analytical thinking is considered the basis of those competencies that enable a person not only to assimilate existing knowledge, but also to evaluate, analyze, interpret and create new knowledge. In the conditions of an information society, where a huge amount of data is distributed daily, special importance is attached to the ability to assess the reliability of information, analyze evidence and make reasoned decisions.

The American psychologist John Dewey noted that the main goal of education is not to memorize facts, but to develop such thought processes that enable a person to make independent judgments and solve problems. Reflective thinking proposed by Dewey is considered one of the foundations of the modern concept of critical thinking. In his opinion, teaching should be based on real problems, experience and active participation of the student.

Critical thinking is closely related to analytical thinking, which involves breaking down complex problems into components, establishing cause-and-effect relationships, interpreting data, and forming logical conclusions. Although these two concepts are often used synonymously, modern researchers note that analytical thinking is one of the important components of critical thinking. Analytical thinking is more focused on structured analysis of the problem, while critical thinking involves evaluation and decision-making based on this analysis.

Over the past two decades, critical and analytical thinking have become one of the main priorities of international educational policy.

Modern pedagogical research agrees that high-level thinking skills are most effectively developed in active learning conditions.

Problem-Based Learning is based on the analysis of real problems, which encourages students to independently research, search for information, and make collaborative decisions. Meta-analyses show that this method significantly improves critical thinking, problem-solving skills, and knowledge transfer.

Project-based learning allows students to create a real product, plan activities, analyze data, and present their own conclusions. According to research, project-based learning is particularly effective for developing analytical thinking and collaboration skills.

Case-Based Learning is widely used in medicine, business, and pedagogy. Discussing real cases helps develop evidence-based reasoning, evaluate alternative solutions, and form professional judgment.

The Socratic method is based on open-ended questions, reasoned discussion, and logical reasoning. It is particularly effective for developing students' ability to reason, self-reflect, and argue.

Research shows that collaborative learning significantly increases both academic achievement and critical thinking, as students learn to listen to different positions, reasoned reasoning, and make joint decisions.

According to the international PISA study, in countries with high results, critical and analytical thinking is an integral part of the learning process.

In Finland, teaching is focused on interdisciplinary projects, problem solving and reflective learning. The assessment system is less focused on mechanical memorization and more on the application of knowledge.

Singapore's educational policy is based on the principle of Teach Less, Learn More, which aims to reduce the mechanical transfer of information and increase the time spent on analysis, research and creative activities.

In Estonia, which is one of the PISA leaders in Europe, special attention is paid to the integration of digital resources, research-based learning and formative assessment.

In Canadian schools, case analysis, collaborative learning and reflective practice are widely used, which gives students the opportunity to think independently and make reasoned decisions.

The national curriculum in Georgia is based on competency-based education and officially includes the development of critical thinking. Nevertheless, both national and international assessments indicate that traditional, knowledge-reproduction-oriented approaches are still prevalent in teaching practice.

Of particular note are the results of OECD PISA 2022, which show that a significant proportion of Georgian students fail to reach the levels of thinking that require information analysis, interpretation, and complex problem solving. At the same time, the share of high-achieving students is lower than the international average. This indicates that despite national policies, there is still a gap in practice between declared goals and the actual learning process.

This circumstance further increases the importance of researching teaching methods that effectively promote the development of critical and analytical thinking and that can be widely implemented in Georgian schools.

The reforms implemented in the Georgian education system in recent years clearly reflect the policy aimed at establishing competence-based learning. The national curriculum pays special attention to the development of critical thinking, problem-solving, communication and collaboration skills. Nevertheless, international assessments show that the declared goals are not fully reflected in teaching practice.

Analysis of data from the OECD PISA 2022 study in Georgia shows that the majority of students are still concentrated on relatively low and medium levels of knowledge. In mathematics, about two-thirds of students (about 66%) reach only levels 1b–2, which indicates the ability to perform basic procedures, but they have difficulty analyzing complex tasks, solving multi-step problems and reasoning. It is even more significant that only about 4–5% reach levels 4–6, which already require abstract, critical and analytical thinking.

The picture is relatively better in the area of reading literacy, although the challenge is still evident. A significant proportion of students successfully complete basic tasks of text comprehension, but only slightly more than 2% reach higher levels, where it is necessary to interpret information, compare different sources, evaluate the author's position and form reasoned conclusions.

Analysis of gender differences shows that girls perform relatively better in reading skills, while boys are slightly better represented at higher levels of mathematics. Nevertheless, in both cases, the share of high-achieving students is so small that it indicates a systemic problem, and not just individual differences.

These data once again confirm that in Georgia there is still a certain discrepancy between the goals set by the national curriculum and actual teaching practice. Formally, competency-based teaching has been introduced, however, in practice, approaches that are focused on the transfer and reproduction of information are still widely used. In such conditions, students are less likely to work on open-ended problems, analyze real-life cases, discuss different positions, or independently formulate conclusions.

Based on the results obtained and the analysis of international experience, several systemic challenges can be identified.

The first challenge is related to teaching methods. Although modern pedagogical approaches are focused on active learning, in practice teacher-centered lessons still dominate, where the student remains in the role of a receiver of information.

The second challenge is the assessment system. In schools, assessment is often focused on finding the right answer and checking factual knowledge, while critical thinking requires open questions, reasoned reasoning, research tasks, and reflective assessment.

The third challenge is related to the process of teachers' professional development. Despite the fact that a number of trainings are conducted, in practice there is still difficulty in using active teaching methods, especially in conditions of large classes and limited time resources.

The fourth challenge is related to learning resources and the effective use of digital technologies. Modern research shows that technology only contributes to the development of critical thinking when it is integrated with problem-based, inquiry-based, or collaborative learning models.

Based on the analysis conducted, several important findings can be identified.

First, international experience shows that critical and analytical thinking develops most effectively when the student is an active participant in the learning process, and not just a recipient of information.

Second, the PISA results indicate that there are still significant challenges in Georgia in terms of developing high-level thinking skills, which indicates the need for a systematic update of teaching methods.

Third, the experience of successful countries confirms that the desired result is achieved only when teaching methods, assessment, curricula, and teacher professional development create a coordinated system.

Fourth, critical thinking cannot be developed by implementing only one specific method. Effective results are achieved by the integrated use of project-based learning, problem-based learning, case analysis, research-based learning, and collaborative learning.

The development of critical and analytical thinking has become one of the main priorities of modern education, although the experience of different countries shows that this goal cannot be achieved only by prescribing relevant competencies in the curriculum. The analysis conducted shows that successful educational systems consider the development of critical thinking not as a separate skill, but as a unified ecosystem of teaching, assessment, and school culture.

OECD and UNESCO documents emphasize that students develop critical thinking most effectively when they have to independently analyze problems, compare alternative opinions, evaluate evidence, and justify decisions. Accordingly, successful education systems significantly reduce reproducible teaching and increase the share of research, collaboration and problem-based learning.

The international experience discussed in the article confirms that Finland, Estonia, Singapore and Canada differ not only in their curricula, but also in the fact that critical thinking is part of everyday learning practices. For example, in Finland, students regularly work on interdisciplinary projects that require searching for information, evaluating various sources and making reasoned decisions. In Singapore, the teaching model aims to reduce the mechanical transfer of information and promote deeper understanding of students. In Estonia, special attention is paid to research-based learning, the purposeful use of digital resources and formative assessment.

The example of Georgia shows a different picture. Although the national curriculum clearly defines the development of critical thinking, PISA 2022 data indicate that the majority of students do not reach the level of competencies that require solving complex problems, interpreting data, and reasoning based on evidence. This discrepancy gives us reason to assume that the challenge is less related to the declared goals of educational policy and more to the quality of their implementation in practice.

One important factor can be considered the choice of teaching methods. When the learning process is mainly aimed at transferring information and checking factual knowledge, students are less given the opportunity to independently analyze issues, ask questions, and formulate their own position. As a result, they successfully complete tasks of low cognitive complexity, but have difficulty solving tasks that require synthesis, evaluation, and argumentative reasoning.

At the same time, changing teaching methods alone is not enough. If the assessment system remains focused on finding the right answer, teachers will be less motivated to use active teaching methods. International research confirms that the alignment between teaching methods and assessment is a necessary prerequisite for the development of critical thinking. Accordingly, the integration of formative assessment, open-ended tasks, research projects and reflective activities into the learning process is as important as the introduction of active teaching methods.

It is also worth noting the growing role of technology and artificial intelligence. Modern digital tools create new opportunities for personalized learning, data analysis and collaborative work. However, technology itself cannot ensure the development of critical thinking. Its effectiveness depends on how purposefully the teacher uses it. If digital resources only serve to provide information, their impact is limited, while if they are integrated with problem-based, research and project-based learning, students' analytical and critical skills increase significantly.

Conclusion

Thus, the conducted analysis confirms that the main challenge for the development of critical and analytical thinking in Georgia is not the lack of a separate method, but rather the insufficient integration of teaching, assessment, professional development, learning resources and school culture. Strengthening this systemic approach can become an important prerequisite for improving the quality of education.

The analysis of the literature has shown that critical and analytical thinking are interconnected, although different cognitive processes. Analytical thinking provides a structured analysis of the problem and the identification of cause-and-effect relationships, while critical thinking involves evaluating information, determining the reliability of arguments and making reasoned decisions based on this analysis. It is the synthesis of these two competencies that creates high-level thinking skills that meet the requirements of modern education and the economy.

The study confirmed that the development of critical and analytical thinking is most facilitated by the systematic use of methods based on active learning. Problem-based learning, project-based learning, case analysis, inquiry-based learning, collaborative learning, Socratic dialogue and reflective practice create a learning environment where students not only acquire knowledge, but also learn to understand, apply and evaluate it.

An analysis of international experience has shown that the success of countries such as Finland, Estonia, Singapore and Canada is based not on the use of a single method, but on the systematic interaction of teaching, assessment, teacher professional development, learning resources and educational policies. In these countries, critical thinking is a natural part of the learning process and not just a goal defined by the curriculum.

One of the important findings of the study is that the development of critical and analytical thinking cannot be achieved only by updating curricula or introducing a separate innovative method. It is necessary to form a single, interconnected system of teaching methods, assessment systems, teacher professional development, digital technologies and school culture. It is precisely this approach that is based on the Integrated Pedagogical Model for the Development of Critical and Analytical Thinking (IPM-CAT) presented in the article, which combines active learning, formal assessment, reflection, collaborative learning and targeted use of technologies.

The results of the study also indicate that the professional role of the teacher is changing significantly. The modern teacher is no longer just a transmitter of knowledge; he or she becomes a facilitator of the learning process, creating an environment where the student learns to ask questions, reason, evaluate alternative views and make independent decisions. Accordingly, the development of critical and analytical thinking should become one of the main directions of both school practice and teacher professional development programs.

Based on the above, it can be said that improving the quality of education is directly related to the extent to which the educational system will be able to transition from traditional models of teaching to active, research-based and student-centered approaches. It is this transformation that will create the basis for raising a generation that will be able not only to use knowledge, but also to create new knowledge, make responsible decisions and successfully adapt to a rapidly changing environment.

Based on the research results, the following recommendations can be formulated:

• Strengthen monitoring of the practical implementation of the National Curriculum and assess the extent to which competency-based learning is reflected in the real learning process.

• The national assessment system should become more focused on assessing high-level thinking skills and not only on testing factual knowledge.

• Systematically introduce problem-, project-, and research-based teaching practices.

• Increase the use of interdisciplinary projects and collaborative learning.

• Schools should create a culture where students' questions and argued different positions are perceived as an important part of the learning process.

• Professional development programs should focus more on the methodology of developing critical thinking.

• Teachers should be retrained in the use of formative assessment, inquiry-based learning, Socratic dialogue, and case analysis.

• Increase the role of professional learning communities, where teachers can share effective practices with each other.

• Strengthen the teaching of pedagogical methods for developing critical and analytical thinking in teacher training programs.

• Pay more attention to the use of active teaching methods in real-world settings in the teaching practice component.

• The use of artificial intelligence and digital tools should serve research-based, problem-based and collaborative learning, and not just provide information.

• Create digital resources that will help students develop critical thinking and problem-solving skills.

The study is based on international and national literature, OECD PISA 2022 data, and an analysis of existing education policies. However, the paper does not include the collection of primary empirical data (for example, surveys or observations of teachers and students), which would have allowed for a more in-depth assessment of the practical application of teaching methods in Georgian schools.

In the future, it is advisable to conduct mixed studies that combine quantitative and qualitative data. A comparative analysis of teaching practices across regions, public and private schools, and different subjects would be particularly interesting. In addition, it is important to assess the impact that AI-supported teaching has on the development of students' critical and analytical thinking.

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The Role of ESG Performance in Attracting Foreign Direct Investment (FDI): Evidence from Emerging Markets

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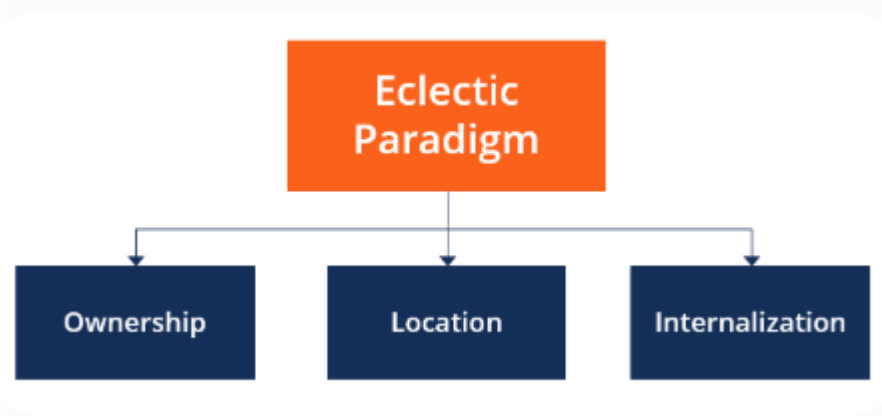
Abstract

This article explores how Corporate Environmental, Social, and Governance (ESG) performance influences the inflows of Foreign Direct Investment (FDI) in emerging markets. As global capital markets increasingly prioritize sustainability, traditional economic determinants of FDI are being supplemented by non-financial risk metrics. The study highlights how corporate sustainability frameworks reshape the international investment landscape, multinational enterprise (MNE) strategies, and host-country policymaking. It analyzes the specific transmission channels—such as information asymmetry reduction, institutional de-risking, and capital cost optimization—through which ESG integration operates. The paper concludes that the integration of robust ESG metrics into national and corporate governance models is no longer an optional ethical consideration but a critical strategic requirement for maintaining global competitiveness and attracting high-quality international capital.

Keywords: FDI; ESG criteria; emerging markets; sustainability; corporate governance; international management; global capital; risk mitigation; signaling theory.

2. Theoretical Foundations, Evolution of FDI Theories, and the Integration of Signaling and Institutional Paradigms

The structural realignment of global financial markets has catalyzed a profound evolutionary shift in the theoretical underpinnings of international business and cross-border capital allocation. For decades, classical theories of Foreign Direct Investment (FDI), including Stephen Hymer's monopolistic advantage theory and John Dunning's seminal Eclectic Paradigm—commonly conceptualized as the Ownership, Location, and Internalization (OLI) framework—focused predominantly on tangible, macroeconomic determinants. Under these traditional frameworks, multinational enterprises (MNEs) optimized their international footprint by seeking host countries that offered abundant natural resources, low-cost labor pools, large consumer markets, and favorable tax regimes.



However, in the contemporary landscape of international management, these conventional cost-benefit paradigms are increasingly insufficient. The rapid escalation of systemic risks, including climate change, regulatory volatility, social inequality, and corporate malfeasance, has forced a critical expansion of the OLI model to incorporate non-financial parameters, specifically Environmental, Social, and Governance (ESG) performance metrics.

In emerging markets, this transformation is highly pronounced due to the pervasive presence of "institutional voids," a concept popularized by institutional economists like Douglass North and later Tarun Khanna. These voids, which manifest as weak regulatory enforcement, volatile legal structures, high corruption levels, and systemic information asymmetry, elevate the transaction costs and risk premiums for foreign investors. When entering these volatile environments, MNEs face severe principal-agent problems and adverse selection.

To understand how ESG performance mitigates these market frictions, scholars increasingly integrate Michael Spence's Signaling Theory with Institutional Theory—specifically Paul DiMaggio and Walter Powell's concepts of mimetic, coercive, and normative isomorphism. From a signaling perspective, a firm's high ESG rating acts as a highly credible, costly signal. Because establishing and maintaining rigorous ESG standards requires substantial capital investment, long-term organizational commitment, and internal structural reforms, it cannot be easily replicated or "greenwashed" by low-quality, opportunistic firms. Consequently, this signal distinguishes high-performing enterprises, offering foreign investors a reliable proxy for operational resilience, strategic foresight, and ethical integrity.

Simultaneously, Institutional Theory explains how the adoption of standardized ESG frameworks allows emerging market enterprises to achieve external legitimacy, effectively importing robust institutional quality and bridging the gap between local regulatory deficiencies and Western institutional expectations. Thus, the integration of ESG metrics into corporate strategies is no longer a peripheral public relations exercise but a fundamental mechanism for reducing transaction costs, resolving information asymmetry, and establishing institutional trust across borders.

3. Paragraph 2: Macroeconomic Transmission Channels, Financial Risk Mitigation, and the Optimization of Capital Costs

The operationalization of ESG performance as an active, structural determinant of Foreign Direct Investment (FDI) inflows is transmitted through three highly distinct, yet economically interdependent transmission channels that collectively de-risk host-country environments, resolve information asymmetries, and optimize the overall capital structures of target enterprises.

The primary and most financially quantifiable channel is the cost of capital optimization mechanism, which fundamentally alters the microeconomic and financial viability of cross-border investments. In modern global capital markets, institutional investors, sovereign wealth funds, and global financial intermediaries do not treat ESG metrics as mere ethical criteria; instead, they systematically incorporate climate, social, and regulatory risks into their sovereign risk premiums, cost of equity, and overall Weighted Average Cost of Capital (WACC) calculations. In mathematical terms, a firm's cost of equity is defined by the Capital Asset Pricing Model (CAPM):

$$E(R_i) = R_f + \beta_i(R_m - R_f)$$

Within this framework, the systematic risk coefficient, (Beta), which measures a firm's volatility relative to the broader market, is directly influenced by its ESG performance. Emerging market firms that exhibit superior ESG compliance benefit from a lowered systematic risk profile, which compresses their equity risk premium. Simultaneously, on the debt side, global lenders, development banks, and institutional bondholders increasingly price environmental and governance risks into their credit default swaps (CDS) and debt yields. This allows ESG-compliant enterprises to enjoy preferential interest margins, lower loan spreads, and the highly coveted "greenium" (green premium) discounts when issuing green, social, or sustainability-linked bonds. By lowering both the cost of equity and the cost of debt, high-performing ESG enterprises in emerging economies experience a structural reduction in their overall WACC. This financial optimization directly increases the Net Present Value (NPV) of potential FDI projects and cross-border joint ventures:

$$NPV = \sum_{t=1}^{n} \frac{CF_t}{(1 + WACC)^t} - Initial\ Investment$$

Because a lowered WACC serves as the discount rate in the denominator, any decrease in this cost of capital exponentially expands the NPV of projected future cash flows transforming marginal investment opportunities in developing regions into highly lucrative, financially viable targets for yield-seeking MNEs.

The second transmission channel operates through operational risk mitigation, supply chain resilience, and systemic de-risking. In emerging markets, where regulatory regimes can be volatile and natural resource management is often highly politicized, physical and transitional climate risks present clear, material threats to the assets of foreign investors. High environmental (E) compliance serves as a practical hedge against these systemic vulnerabilities. By adopting resource-efficient technologies, minimizing waste, reducing greenhouse gas emissions, and proactively adapting to low-carbon transition pathways, an enterprise insulates its manufacturing facilities and physical infrastructure from impending regulatory fines, carbon taxes, and costly ecological liabilities.

On the social (S) front, robust labor standards, rigorous occupational health and safety protocols, fair compensation, and proactive local community engagement construct a deep reservoir of "social capital." In transitioning economies, where formal institutional safety nets are often absent, this social capital acts as a critical buffer, shielding foreign-owned operations from highly disruptive labor strikes, local protests, community-led blockades, and political instability that can instantly freeze production and compromise physical assets. Furthermore, by securing localized supplier compliance with strict labor codes, MNEs mitigate the risk of sudden, catastrophic supply chain breakages, ensuring a steady, predictable flow of raw materials and intermediate goods across international borders.

Finally, the third channel is the reputational equity, corporate valuation, and brand preservation mechanism. In an era characterized by hyper-connectivity, instant digital communication, and intense consumer and shareholder activism, global MNEs no longer operate in geographic isolation. They are highly vulnerable to "reputational spillover" and "contamination effects," where an environmental disaster, labor exploitation scandal, or corruption charge occurring in a remote emerging market subsidiary can instantaneously trigger a global public backlash. Such localized failures can decimate a parent company's brand equity, spark consumer boycotts in high-income domestic markets, and trigger massive sell-offs by institutional investors bound by strict ESG mandates, wiping out billions of dollars in parent-company market capitalization overnight.

By investing exclusively in host-country enterprises that maintain verified, high-quality ESG performance, MNEs secure their global "Social License to Operate" (SLO). This alignment not only satisfies the ethical demands of home-country consumers and activist shareholders but also ensures absolute compliance with the highly complex, extraterritorial sustainability reporting directives imposed by advanced economies.

Consequently, these three transmission channels work in structural synergy, transforming ESG performance from a traditional administrative compliance expense into an active, value-generating strategic asset. This integration insulates foreign direct investment from micro-level operational

disruptions, mitigates severe macro-level country risks, and establishes a secure, transparent, and financially optimized environment that attracts long-term, high-quality international capital.

4. Deconstructing the Tripartite ESG Framework, Econometric Modeling, and Methodological Rigor

To fully grasp the empirical relationship between sustainability and capital attraction, it is critical to deconstruct the ESG framework into its individual, functionally distinct pillars while establishing a highly robust econometric methodology designed to isolate and test these complex dynamics without relying on simplistic representations. The Environmental (E) pillar has experienced the most rapid and complex evolution in the eyes of international investors, transitioning from a compliance-oriented checkmark to a core metric of long-term economic viability. Global capital networks now demand granular disclosure regarding direct emissions, indirect emissions from purchased energy, and highly complex value chain carbon emissions, alongside detailed assessments of circular economy transition strategies, waste-to-resource ratios, and localized biodiversity preservation efforts. In highly resource-intensive, extractive, and heavy industrial sectors, strong environmental performance acts as a critical leading indicator of an enterprise's dynamic capability to navigate the global transition to a low-carbon economy. This proactive alignment directly mitigates the catastrophic risk of stranded assets—infrastructure or reserves that prematurely lose their economic value due to tightening carbon taxation, shifting consumer preferences, and evolving climate regulations.

Simultaneously, the Social (S) pillar assesses how an enterprise systematically manages its relationships with its labor force, surrounding communities, and supply chain partners. In emerging economies, where state-backed social safety nets, healthcare systems, and labor protections are often fragmented or weak, corporate social investments carry immense strategic weight. By actively investing in fair wages, gender equality, workplace safety, robust employee well-being programs, and local community development, an enterprise builds invaluable social capital and local legitimacy. This local goodwill acts as a structural insurance policy, mitigating the threat of localized civil conflicts, strikes, regulatory investigations, and community protests that can instantly derail multinational operations.

The Governance (G) pillar, however, serves as the foundational, non-negotiable baseline of corporate legitimacy and investor protection. It encompasses critical structural mechanisms, including minority shareholder rights, board independence and diversity, robust internal audit and whistleblowing controls, strict anti-bribery and anti-corruption policies, and the alignment of executive compensation packages with audited, long-term sustainability key performance indicators. In transitioning and emerging economies, where national legal frameworks are often volatile and contract enforcement is slow, strong corporate governance acts as an essential institutional substitute for weak national judiciaries, assuring

foreign investors that their capital is shielded from managerial opportunism, transfer pricing abuses, and sudden expropriation.

To empirically validate these theoretical assumptions, researchers must move beyond simple ordinary least squares regressions and deploy highly sophisticated panel data econometrics capable of addressing severe statistical challenges, most notably endogeneity, reverse causality—where high foreign direct investment inflows provide target firms with the surplus capital necessary to improve their sustainability scores, rather than vice versa—and omitted variable bias. To systematically capture these relationships, we propose a highly structured, dynamic panel data model. In this comprehensive specification, the net foreign direct investment inflow, measured either as a percentage of gross domestic product or as absolute, log-transformed capital flows, serves as the dependent variable. Crucially, the model incorporates its own historical lag as an independent regressor. The inclusion of this lagged dependent variable is philosophically and mathematically vital as it captures the path-dependent, self-reinforcing nature of international capital flows, where historical investments signaling market viability attract subsequent waves of capital.

The primary independent variable of interest is the lagged composite environmental, social, and governance performance score, or the isolated sub-scores for each individual dimension. Utilizing lagged values systematically accounts for corporate reporting delays, aligns the timing of disclosure with subsequent investment decisions, and provides a preliminary defense against simultaneous endogeneity. To ensure structural robustness and avoid omitted variable bias, the model controls for traditional macroeconomic determinants of investment: gross domestic product controls for market size, consumer purchasing power, and economic growth; trade openness measures the level of global trade integration, calculated as the sum of exports and imports relative to gross domestic product; and the inflation rate serves as a proxy for monetary stability and overall macroeconomic risk. Furthermore, the model incorporates unobserved country-specific or firm-specific fixed effects that capture time-invariant institutional characteristics such as geographical location, historical legal systems, or foundational cultural attitudes toward business, alongside time-specific fixed effects designed to capture global macroeconomic shocks, such as worldwide recessions or sudden shifts in international environmental treaties.

To resolve the inherent correlation between the lagged dependent variable and the fixed-effects error term—commonly referred to as Nickell bias—as well as the deeper endogeneity of the sustainability variables, researchers should avoid static estimators. Instead, they must utilize the system Generalized Method of Moments estimator developed by Manuel Arellano and Olympia Bover. This advanced econometric approach estimates a system of equations in both first-differences and levels, utilizing lagged differences of the variables as instruments for the equation in levels, and lagged levels of the variables as

instruments for the equation in first-differences. By verifying instrument validity through the Hansen test of over-identifying restrictions and confirming the absence of second-order serial correlation in the residuals via the Arellano-Bond test, researchers can isolate the exact elasticity of foreign capital inflows in relation to incremental improvements in sustainability performance. This methodological rigor provides corporate leaders and policymakers with unbiased, statistically consistent, and highly actionable empirical evidence of the true impact of ESG performance on international capital attraction without the distorting noise of endogeneity or structural bias.

5. Internal Organizational Restructuring, Strategic Risk Management, and Human Capital Transformation

The escalating significance of ESG performance in attracting foreign capital has triggered a profound internal reorganization within both multinational enterprises (MNEs) and their host-country subsidiaries, fundamentally redefining corporate hierarchies, strategic management practices, and the underlying nature of competitive advantage. Historically, corporate sustainability was treated as a marginalized public relations or corporate social responsibility (CSR) marketing function, structurally detached from core financial decision-making, capital budgeting, and long-term strategic planning. Today, however, drawing on Jay Barney's Resource-Based View (RBV) and Teece's framework of Dynamic Capabilities, MNEs are actively dismantling these organizational silos, recognizing that sustainable resource management and ESG compliance constitute rare, inimitable, and non-substitutable strategic capabilities. This organizational transformation has led to the establishment of highly sophisticated Enterprise Risk Management (ERM) frameworks—increasingly aligned with the Committee of Sponsoring Organizations of the Treadway Commission (COSO) standards and the Task Force on Climate-related Financial Disclosures (TCFD) guidelines—that integrate non-financial ESG metrics directly into the initial stages of foreign market entry, greenfield project valuation, and cross-border merger and acquisition (M&A) due diligence. Rather than applying uniform discount rates, forward-looking CFOs now adjust cost-of-capital estimates and project hurdle rates based on target-firm ESG performance, directly embedding climate risk, labor vulnerability, and regulatory compliance into discounted cash flow (DCF) models. This structural integration has elevated the Chief Sustainability Officer (CSO) from a symbolic figurehead to a powerful, strategic executive who operates at the absolute center of corporate governance, working in close, systemic coordination with Chief Financial Officers (CFOs) and Chief Risk Officers (CROs) to evaluate how host-country environmental regulations, evolving labor dynamics, and localized governance frameworks alter the overall risk-return profile of international projects. Furthermore, this internal realignment is increasingly institutionalized through board-level oversight, with the creation of dedicated ESG and

sustainability committees and the direct linking of executive variable compensation to the achievement of quantifiable, audited sustainability key performance indicators (KPIs).

This corporate evolution and the subsequent mitigation of agency costs are highly dependent on systemic technological innovation, as MNEs deploy a suite of Fourth Industrial Revolution technologies to ensure data integrity across geographically dispersed operations. To bypass the historically unreliable, fragmented, and easily manipulated self-reporting mechanisms characteristic of many emerging market jurisdictions, MNEs are actively constructing digital, real-time audit trails. By leveraging artificial intelligence (AI) algorithms for predictive risk modeling, geographic information systems (GIS) and satellite imagery to monitor deforestation or localized environmental degradation in real time, and Internet of Things (IoT) sensors to track emissions and resource consumption directly at the factory floor, parent companies can bypass host-country informational deficits. This real-time data is increasingly secured through decentralized, tamper-proof blockchain-based supply chain tracking systems, creating an unalterable ledger of product provenance, fair-labor practices, and environmental compliance that can be transparently shared with global regulators and institutional investors. This technological shift, while resolving classic principal-agent informational asymmetries, has simultaneously initiated a comprehensive and highly disruptive transformation of human capital requirements in the global economy, precipitating a fierce, cross-border "war for talent." There is an acute global shortage of international managers who possess the necessary multidisciplinary skillset—often referred to as "sustainability literacy"—which combines deep corporate finance expertise and quantitative data analytics with a sophisticated understanding of environmental science, international human rights law, and evolving global regulatory compliance structures.

To bridge this severe competency gap, leading business schools and executive development programs are undergoing radical curriculum overhauls, shifting away from traditional, Friedman-centric shareholder wealth maximization models to prioritize comprehensive training in carbon accounting, double-materiality analysis, environmental jurisprudence, and multi-stakeholder negotiation strategies. This educational pivot creates a new class of global managers capable of translating complex, non-financial sustainability metrics into quantifiable financial performance and strategic resilience. For local managers operating in emerging economies, this global human capital transformation carries an urgent, transformative message: the capacity to secure high-value global partnerships, benefit from the downward vertical spillover of technological capabilities, and lower the corporate risk premium is no longer determined by low-cost operational efficiencies alone. Instead, it depends on their proactive ability to undergo intense cognitive and structural restructuring, master international sustainability reporting

standards, and redesign their internal organizational systems to match the rigorous, technologically enabled transparency demanded by global investment networks.

6. Regulatory Fragmentation, Greenwashing, Policy Reform, and the Macroeconomic Horizon

Despite the undeniable strategic advantages of ESG integration, the intersection of sustainability and international capital flows is fraught with systemic frictions, structural inequalities, and complex macroeconomic challenges that require immediate attention from global policymakers, corporate strategists, and academic researchers alike. One of the most critical and persistent barriers to efficient capital allocation is the severe divergence in ESG rating methodologies, a phenomenon famously conceptualized in academic literature as "aggregate confusion." Because prominent rating providers—such as MSCI, Refinitiv, Sustainalytics, and S&P Global—rely on proprietary algorithms, differing data sources, and subjective qualitative assessments, they assign widely inconsistent scores to the very same enterprise. This divergence stems from three distinct methodological dimensions: scope divergence, which refers to the specific set of attributes a rating agency chooses to measure; measurement divergence, which involves the distinct indicators used to assess those attributes; and weight divergence, which reflects the varying degrees of relative importance assigned to each component. Unlike highly correlated credit ratings, which typically exhibit a correlation coefficient of over 0.99, correlation among major ESG ratings ranges from a mere 0.30 to 0.60. This fragmentation generates immense information noise, enabling opportunistic corporate behavior and facilitating sophisticated forms of greenwashing, where firms exploit rating discrepancies to present a symbolic facade of sustainability without implementing substantive operational reforms. In the absence of a reliable, standardized metric, foreign direct investors struggle to accurately price non-financial risks, leading to capital misallocation and complicating the empirical validity of academic research attempting to establish causal links between sustainability performance and FDI attraction. Furthermore, this noise threatens to devolve emerging capital markets into a classic "market for lemons" as described by George Akerlof, where high-quality, genuinely sustainable enterprises are crowd out by greenwashed competitors because investors cannot reliably verify the authenticity of corporate disclosures.

Beyond these informational frictions, the global imposition of stringent Western-centric ESG standards can function as an insidious form of "green protectionism" and regulatory neo-colonialism. Regulatory frameworks designed in advanced economies, such as the European Union’s Carbon Border Adjustment Mechanism (CBAM) and Corporate Sustainability Reporting Directive (CSRD), impose extraterritorial compliance mandates that extend deep into the global value chains (GVCs) of emerging markets. Multinational enterprises, seeking to derisk their own balance sheets and comply with Scope 3 emissions

reporting, systematically offload their upstream environmental and social auditing responsibilities onto small and medium enterprises (SMEs) in developing host economies. These local suppliers, operating in environments characterized by limited financial resources, fragile digital infrastructure, and a lack of technical expertise, face asymmetric administrative and financial compliance costs that threaten their survival. Unable to afford expensive independent verifications or comprehensive carbon-accounting systems, many local SMEs face the risk of being marginalized and excluded from multinational supply chains, which ultimately exacerbates historical North-South economic disparities, limits technology transfer, and fuels regional economic isolation. This regulatory disconnect is further intensified by the ideological and legal conflict between the European Union's "double materiality" paradigm—which mandates that firms report both on how sustainability issues affect their financial value and how their business activities impact society and the planet—and the International Sustainability Standards Board (ISSB) focus on "financial materiality," which prioritizes information solely relevant to investor decision-making.

To resolve these systemic market failures and geopolitical tensions, international standard-setting bodies must accelerate their transition toward a unified, legally binding, and globally harmonized sustainability disclosure framework. Concurrently, for host-country governments and investment promotion agencies (IPAs) in emerging economies, these shifting dynamics demand a radical transformation of their economic development strategies. The historical model of attracting FDI by engaging in a "race to the bottom"—competing through severe deregulation, weak labor protections, and primitive fiscal incentives—has rendered countries vulnerable to volatile, short-term "hot money" and asset-stripping. To attract high-quality, long-term institutional "patient capital," developing states must transition to a proactive "race to the top" by establishing national green taxonomies that align with international frameworks, mandating independent third-party ESG audits to eliminate local greenwashing, and mobilizing public-private partnerships to build sustainable industrial zones powered by renewable energy. Ultimately, the future of international management will be defined by the absolute, irreversible convergence of capital allocation and sustainable development, where the capacity of emerging markets to maintain global competitiveness, secure foreign direct investment, and achieve robust macroeconomic growth will depend entirely on their systemic ability to embed transparent, authentic, and high-performance ESG principles into the very fabric of their corporate and national governance architectures.

This study deconstructs the systemic and multidimensional relationship between Corporate Environmental, Social, and Governance (ESG) performance and the attraction of Foreign Direct Investment (FDI) in emerging markets. By expanding John Dunning's classical Eclectic Paradigm to

incorporate non-financial risk metrics, we demonstrate that sustainability is no longer an auxiliary corporate social responsibility (CSR) initiative. Instead, robust ESG integration functions as an essential, value-generating asset that actively mitigates transaction costs, bridges institutional voids, and signaling organizational resilience to global capital networks.

Our analysis highlights three critical transmission channels through which superior ESG performance translates into enhanced capital attraction. First, the cost of capital optimization mechanism compresses systematic risk profiles, resulting in lowered equity risk premiums and greenium-backed debt discounts, which exponentially raises the net present value of cross-border investments. Second, the operational risk mitigation channel insulates physical assets from ecological liabilities and fosters localized social capital to shield operations from civil and labor disputes. Third, the reputational equity preservation channel provides multinational enterprises with a secure "Social License to Operate" (SLO), protecting parent companies from volatile market value fluctuations driven by distant subsidiary failures.

Methodologically, this paper underscores the necessity of employing advanced dynamic panel data econometrics—specifically the system Generalized Method of Moments (GMM) estimator—to isolate the true causal impact of ESG scores on FDI, thereby systematically controlling for Nickell bias, omitted variables, and reverse causality. Furthermore, we address the pressing macroeconomic hurdles within the global sustainability landscape, highlighting how the divergence in ESG rating methodologies (aggregate confusion) and the rise of extraterritorial regulatory mandates (such as the EU's CBAM and CSRD) can inadvertently marginalize small and medium enterprises (SMEs) in developing countries, sparking concerns of "green protectionism."

To navigate these challenges, host-country governments and investment promotion agencies must abandon the obsolete, deregulatory "race to the bottom" strategy. Instead, they must proactively initiate a "race to the top" by establishing national green taxonomies that align with international disclosure standards, mandating independent third-party sustainability audits to eradicate greenwashing, and financing sustainable industrial infrastructure. Ultimately, the future of international capital allocation is irreversibly tied to sustainable development; those emerging economies that systematically integrate authentic, transparent, and high-performance ESG principles into their national and corporate governance architectures will successfully secure long-term, high-quality foreign investment, ensuring robust and resilient macroeconomic growth in an increasingly carbon-constrained global economy.

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