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# Table of Contents

- I. Preface**
- II. Editorial Team**
- III. Ritual, Relationship, and Resistance: The Praxis of Family Spirituality, Secular World-Based on the Day of Rest in Psalm 23**  
Page 5–16
- IV. The Relevance of Mexico's Mega Public Investments and Its Emphasis on the Rescue of Its Macrosouth Region: Towards a Paradigm Shift in the Face of the Prevailing Neoliberal Strategy**  
Page 17–44
- V. Curriculum Evaluation and the Democratic Republic of the Congo Self-defense: A Way to Peace**  
Page 45–50



## Peer-Reviewed Research Articles



# Ritual, Relationship, and Resistance: The Praxis of Family Spirituality, Secular World-Based on the Day of Rest in Psalm 23

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## ABSTRACT

*This research paper examines the six verses of Psalm 23 using a historical-literal hermeneutic to explain their theological meaning and to evaluate their relevance to family spirituality in a socio-cultural context that is increasingly secularised. The research problem is to identify the impact of the presentation of God as Shepherd by David on the domestic domain of ceremonial practice, relational processes, and spiritual resistance. Using both close textual analysis and a survey of available scholarship, the findings suggest that Psalm 23 serves as a model of divine provision, guidance, protection, and hope, thus strengthening spiritual identity and creating resilience. The study finds that the orientation of the life of the family around the person and ministry of God, as actualised in the person of Jesus Christ, is the inescapable foundation of the maintenance of authentic spirituality within modern society.*

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## I. INTRODUCTION

Life requires orientation, and life practices are often disrupted by the presence of newer values. Orthodoxy versus secularization is an unavoidable reality. This polarized clash of values resonates with families and their spirituality. Abraham Kuyper famously warned that modernity has produced “a life-system which stands squarely over against Christianity, insisting that no domain of human existence is religiously neutral. This polarized clash of values resonates within the Christian home, where the worship of YHWH revealed in the Lord Jesus Christ forms the essence of true spirituality. Isaiah 60 provides a theological foundation for prioritizing genuine spirituality, calling God’s people, such as Israel and the nations, to worship and proclaim His works. The basis of this proclamation is centered on the person of God, revealed by Christ to His holy and universal people.

The fundamental framework of this textual quotation directs the reader to the obligation to recount God’s deeds, which extend from the nation of Israel to the nations (cf. John 4:24). This call addresses the consciences of Israel and the nations to experience God in their own lives. Rooted in this proclamation is the centrality of God’s person as revealed in Christ, a theme echoed by Calvin, who writes that “in the face of Christ, we behold the pure and lively image of God. Herman Bavinck similarly argues that Christian experience must be “integrated into the whole of life,”<sup>5</sup> resisting the fragmentation of modern secular culture. Despite the challenges, the positive aspect is that believers’ understanding is correctly understood when encountering external values. This represents a spiritual maturation. This article emphasizes the importance of spiritual maturity, grounded in Psalm 23. It is hoped that individuals will gain a strong foundation for personal resilience. They will stand firm, move forward, and continue to worship God. The emphasis on deep relationships is paramount in a secular world.

## II. PROBLEM

Conflicting self-values are increasingly formed within the family, and as God’s people who proclaim His wonders, believers now face worldly values that continually shift toward the devaluation, fragmentation, and isolation of the individual. This confrontation with secular pressures produces a spiritual tension within Christian households,

exposing the vulnerability of families whose identity and practices are not deeply rooted in the person of God. Thus, a clear theological problem emerges: What theological resources in Psalm 23 offer constructive spiritual formation for Christian families under secular pressures?

This reality requires intentional theological grounding, one that anchors spirituality not in cultural trends but in the covenantal presence of God. As Psalm 23 emphasizes, true formation begins with God’s shepherding care. Robert Alter (2003:230) observes that while Psalmic imagery may draw from ritual and liturgical settings, “the general character of most of the Psalms is almost undeniable,” highlighting their enduring capacity to shape the spiritual imagination of God’s people. In this sense, Psalm 23 offers more than poetic comfort; it provides a stabilizing theological framework capable of addressing the spiritual needs of modern families navigating secularization. Referring to this importance, Os Guinness mentioned the effort to reclaim the reason for the existence of the Christian family in the world, amidst the challenges of the secularization process. He stated that:

As a culture, secularization essentially involves the family’s strength being transformed into weakness, and its role from giving to judging. Constructive elements are being replaced by destructive ones. This is a fundamental concern for families. The process of change requires a spiritual, theological foundation. This aspect focuses on assurance in facing the process of change, and that assurance comes from the person of God in Christ. As emphasized in Romans 8:28 and Philippians 1:6, God’s involvement in the family is essential.

## III. METHOD

The research is based on a historical-grammatical (literal) approach, which analyzes Psalm 23 in its historical context and grammatical form to determine the meaning the writer intended to convey. The methodology involves a careful exegesis of the Hebrew text, a careful study of grammar and syntax, and a mindful reflection of the pastoral and covenantal imagery of the Psalm in the wider canonical story. Further, the study relies on the exegetical traditions of Reformed theologians, including Calvin, Bavinck, and more recent Reformed studies, to explain the theological motifs in the Psalm in the light of the covenantal shepherding of God. The investigation is

based on primary materials, including the Masoretic Hebrew text, intertextual relationships in the canonical Scriptures (especially the Gospel of John), and classical Reformed theological interpretations of Psalm 23.

It also uses secondary literature, such as sociological interpretations of secularisation (Durkheim), theological discussion of the idea of modernity and eschatology (Moltmann), and cultural-theological discussions of secular pressures on Christian families (Guinness). Such a combined treatment of the Psalm allows reading it historically and theologically, following its vision of rest (v. 2) into the fulfilment in Christ, of its New Testament, and in particular in the description of Jesus as the One who gives living water which John gives (Joh 7:37; see 1993). This mixed approach, historical-grammatical analysis, canonical interpretation, and listening to the voices of both the past and the present theologians, this study tries to find out the meaning of the text and its positive application in shaping robust, harmonious and Christ-centered family spirituality in the secular age.

#### IV. THESIS STATEMENT

The proposed meaningful fact in Psalm 23 regarding 'the day of rest' is a form of true spiritual life, as alluded to in verse 2 as a whole.

This hypothesis develops what E.P. Sanders alluded to: the coherence of the hypothesis depends on the strength of theological motives (1985:99). This is stated in Psalm 23, in the statements at the beginning and end of the passage. Therefore, proof of this theological assumption is necessary.

#### V. STRUCTURE OF THE TEXT OF PSALM 2

##### 5.1 Text Setting

Although this poem has no literal setting, it does have a rich metaphorical one. The speaker imagines God as a shepherd leading his sheep to the places sheep love most: green fields and quiet streams. The reader can picture the idyllic countryside in this image, a peaceful landscape full of serenity and freshness. However, these peaceful fields are not the only place the speaker finds God. God is also present in the "valley of the shadow of death," a well-known and evocative metaphor for moments of deep and terrifying suffering that arise

in any human life. Perhaps the reader can feel the chill of that shadow.

Next, the speaker visits another metaphorical setting: a banquet table in the house of God. This is no ordinary banquet, but a holy communion, where God blesses the speaker with precious oils. This holy communion, overflowing with abundance, is a concrete representation of the inner nourishment the speaker finds through his faith. Psalm 23 was important and influential, even in its day; the idea of God as shepherd has been passed down through biblical tradition for centuries, all the way to the New Testament Book of John, where Christ famously refers to himself as the "good shepherd."

##### 5.2 Text Sound

THE LORD is my shepherd; \* therefore, can I lack nothing.

He shall feed me in a green pasture, \* and lead me forth beside the waters of comfort.

He shall convert my soul, \* and bring me forth in the paths of righteousness for his Name's sake. Yea, though I walk through the valley of the shadow of death, I will fear no evil; \* for thou art with me; thy rod and thy staff comfort me.

Thou shalt prepare a table before me in the presence of them that trouble me; \* thou hast anointed my head with oil, and my cup shall be full.

Surely thy loving-kindness and mercy shall follow me all the days of my life; \* and I will dwell in the house of the LORD forever.

##### 5.3 Text Transliteration

23:1 --Miz-MOR le-DA-vid, a-do-NAI ro-I lo ekh-SAR.

23:2 -- bin-OT de-SHE yar-bi-TSE-ni al-mei me-nu-KHOT ye-na-ha-LE-ni

23:3 -- NAF-shi y'-sho-VAYV, yan-KHE-ni b'-ma-g'-LEI tze-DEK, I'-MA-an sh'-MO.

23:4 -- gam ki-e-lekh b'-gei tzal-mavet lo-i-ra ra ki-a-tah i-ma-di shiv-te-kha u-mish-a-ne-te-kha

he-ma ye-na-cha-mu-ni

23:5 -- ta-a-ROKH I'-fa-NAI shul-KHAN NE-ged tzor-RAI, di-SHAN-ta va-SHE-men ro-SHI,

ko-LIHAT r'-va-YAH

23:6 --AKH TOV va-KHE-sed yir-d'-FU-nee  
kol y'-MAY kha-YAI v'-shav-TEE b'-vayt a-do-NAI

IO-rekh ya-MEEM

#### 5.4 Text Interpretation

God's presence is not only comforting but also transforming, enabling the reader to feel secure, loved, and deeply fulfilled even in the midst of suffering.

In verses 4 and 5, the speaker addresses God with extraordinary faith and trust. Even in the "valley of the shadow of death" "times of danger and fear, the speaker is not afraid, because "You are with me." This means that the speaker feels that God is always there, even in the worst of times. By addressing God directly here, the speaker evokes the closeness they describe: they don't need to seek God to speak to Him; He is already there.

In verse 5, the speaker's appeal to God shifts from an expression of faith to an expression of praise (Revelation 3:20). Here, the speaker speaks to God about the extraordinary and unexpected goodness God has done for them, preparing a feast for them even when they are surrounded by "enemies" and providing them with holy oil. God, of course, is expected to already know that He has done this as the speaker; The use of apostrophes directly to the speaker indicates that the speaker is getting something from thanking God for their good deeds, dreaming of imagining all the blessings God has given them.

Psalm 23 opens with the foundational confession: יְהוָה רֹעִי (YHWH ro'i, "The LORD is my shepherd"). The verb that follows in verse 1—לֹא אֶחָסָר (lo' 'eḥsar, "I shall not lack") expresses complete covenantal sufficiency grounded in God's provision. In verse 2, David declares that God יְרִבְצֵנִי (yarbiṣēnî, "causes me to lie down") בְּנֵאוֹת דָּשָׁא (bin'ōt deshe', "in pastures of tender grass"), establishing the theme of Sabbath-rest as divine initiative rather than human achievement. The subsequent phrase עַל-מַי מְנוּחֹת יְנַהֲלֵנִי ('al-mē menūḥōt yenhālēnî, "He leads me beside waters of rest") introduces the motif of spiritual restoration that shapes Christian family life.

Reformed theologians highlight the theological depth of these expressions. Calvin notes that David's use of intimate pastoral imagery reveals that "our life is nowhere safe except under God's faithful care". G. C. Berkouwer similarly emphasizes that the believer's rest is grounded not

in subjective feeling but in "the unwavering reality of God's covenant faithfulness". Thus, the Hebrew text read through a historical-grammatical and Reformed lens presents Psalm 23 as a theological paradigm in which God Himself restores, guides, and secures His people, offering Christian families a counter-formation to the anxieties produced by secular culture.

#### 5.5 The Secularization Process: Changes in Content and Values

Referring to Emile Durkheim's theory of religion and society, the two are interdependent and inseparable. Durkheim further emphasized that reality and society, within the framework of the theory of religions, demonstrate that secularization in Europe was caused by economic and political revolutions. Therefore, it can further explore the past secularization of that civilization, which significantly influenced Western civilization. Abraham Kuyper famously warned that secularization is not a neutral cultural shift but "a rival life-system standing squarely over against Christianity, challenging families to recover a God-centered orientation in all of life. Herman Bavinck likewise observed that secular modernity fragments human existence by "detaching life from its source in God, producing the spiritual disintegration Psalm 23 seeks to heal.

Meanwhile, in his treatise, Jürgen Moltmann sees the secularization process as being caused by three factors: a problematic relationship between words and reality. b. an incongruent relationship between words and existence. c. experienced truth does not demonstrate correspondence, conformity, or agreement. Therefore, the process of secularization can be prevented by proclaiming eschatological revelation. God makes all things new through His Covenant with Christ.

#### 5.6 Spiritual Paradigm of Nations

Observing the direction and values of the times and their influence to this day, Os Guinness believes that human civilization has experienced abrasion due to progress... and given birth to what is known today: a lack of awareness of the social dimension of faith. As Robert Morgan said, the religious and moral instruction, motivation, and sanctions that guide Christian faith and life (2003:115). This is caused by the emptiness of social sensitivity and its replacement with purely intellectual abilities. And in its current development in the era of intelligent machines, at least the

cognitive aspect has become a criterion for a nation's success and is also its identity. This is depicted in the flow of social change in the nation's conscience.

Specifically, citing Daniel 12:3, "Knowledge will radiate like the bright expanse of heaven, and those who lead the many to righteousness will be like the stars forever and ever." There is an intense encounter between the rise of science and knowledge, such as AI, and the proclamation of Christ's work for the forgiveness of sins. This represents the emergence of secularization versus true spirituality. Anticipating this with perseverance (determination), both in individual worship and collective efforts to reach many people into the truth, is what remains constant and the wisest way. Through this spiritual path, God's actions and vision for Israel and the nations are revealed in redemption. This is the key to the primacy of spirituality in the face of change due to secularization.

The characteristics of spirituality include faith, hope, and love within the hearts of the righteous. The author defines the paradigmatic need for spirituality in the face of secularization as related to "a space for escape". It is about escaping from the darkness of the world into the light of Christ's glory (cf. John 5:24; 2 Corinthians 4:6 and WW 3). This is similar to the Lord Jesus' commission for His disciples to go out to reach them to the ends of the earth (cf. Romans 10:6-10).

## VI. DISCUSSION

Spirituality is useful in terms of being able to work with a variety of spiritual expressions, both traditional and non-traditional, and the need to utilize a variety of theories, research, and clinical methods to capture at least some of this complex and elusive phenomenon. Furthermore, it is helpful to further our understanding of attempts to "explain spirituality" by reducing it to seemingly overriding psychological, social, or physical processes. Instead, the author's view remains that spirituality is understood and addressed as a legitimate dimension of human experience.

This reduction reflects what Cornelius Van Til identified as the fundamental flaw of secular thought: "autonomous human reason setting itself over against the revelation of God. Within such frameworks, spirituality becomes detached from divine transcendence and anchored instead in

human self-construction. Reformed theologians have consistently challenged this secularization of the soul. David Wells argues that modern psychology has contributed to a "weightless God", a God pushed to the margins of human consciousness while therapeutic categories dominate spiritual understanding. Richard Lints similarly contends that secular modernity trains individuals to interpret identity not in relation to God's covenantal presence but through "expressive selfhood," which fragments moral and spiritual coherence. Michael Horton goes further, noting that therapeutic culture replaces biblical anthropology with a "technique-driven self," assuming that human flourishing can be achieved without reconciliation to God. These critiques demonstrate how secular psychology inadvertently forms spiritual assumptions contrary to the biblical world.

Against this background, Psalm 23 offers a radically different anthropology, one grounded not in self-definition but in divine shepherding. The Psalm presents the human person as a dependent creature whose identity, wholeness, and resilience emerge only through communion with God. As the text declares, "He restores my soul" (Ps. 23:3), a statement that presupposes God's sovereign initiative in renewal rather than human self-repair. This stands in stark contrast to Freud's belief that religious faith arises from the infantile desire for protection, which he describes as an "illusion". Van Til counters this psychological reductionism by insisting that "man is at every point confronted with God and dependent on Him for interpretation of himself and the world.

In moments of crisis, alienation, and suffering, Psalm 23 provides a theological alternative to secular therapeutic categories. While modern psychology often interprets distress through frameworks of conflict, repression, or environmental conditioning, the Psalm frames human vulnerability within God's protective presence: "You are with me; your rod and your staff, they comfort me" (Ps. 23:4). Horton notes that such covenantal presence reveals a deeper truth about human life: "We are not autonomous selves seeking coping strategies, but creatures upheld by God's sustaining grace.

In feelings of loss and emptiness, in questions of meaning and purpose, in feelings of alienation and abandonment, and in cries of injustice and neglect. Spirituality, in short, is another dimension of life. A remarkable dimension, but an essential part of everyday life and the purpose of being

human. Individuals are more than just psychological, social, and physical beings, but also spiritual beings.

When people go about their daily work, they don't leave their spirituality behind. They bring with them beliefs, practices, experiences, values, relationships, and spiritual struggles. Implicitly or explicitly, this complex of spiritual factors often enters into a process of searching for healing. In the Old Testament Psalms, this is how everyday life requires reframing (cf. Psalm or Zabur 23: "He restores my soul.")

In the emerging field of artificial intelligence (AI), religion began to be seen as an obstacle to the scientific quest for enlightenment and a barrier to rational self-fulfillment. The goal was to improve the human condition. Commenting on this transition, David Wulff (1997) wrote, "Only the new social sciences, working in concert with the physical and biological sciences, could hope to free humanity from fear and suffering. This was the very foundation that, some say, inspired the first prayers and mantras. Psychology began to attract young people dissatisfied with their religion; they were "enlightened fundamentalists" who firmly believed that religious belief would follow the path of other superstitions as scientific knowledge advanced. Religion and revelation were dismissed as myths. To this day, the neglect of religion is becoming increasingly apparent.

From this context emerged models of personality and psychotherapy that portrayed spirituality in oversimplified and stereotypical terms. Consider behaviorism and psychoanalysis, two major psychological paradigms of the 20th century. B. F. Skinner, the founder of behaviorism, was himself a product of the fundamentalist religion he later rejected. "God," he wrote, "is the archetype of an explanatory fiction" (1971, p. 201). He believed that religion maintains this fiction by attempting to control behavior, primarily through the use of aversive means, including punitive laws, fear of hell and damnation, and religious practices that discourage sinful behavior.

Similarly, Sigmund Freud was raised in a moderate Jewish family, but he eventually rejected traditional Jewish beliefs and practices, although he continued to identify himself as Jewish, culturally and ethnically. Freud (1927/1961) argued that religion is rooted in the child's sense of powerlessness in a world filled with dangerous forces. Early in life, he theorized, the child is able to find comfort and security in the presence of his father. As the child

grows older, he discovers his father's limitations, but the child must continue to reckon with the forces of nature, powerful others in the world around him, and the powerful conflicts within himself. From the child's deep desire for safety and protection from hostile, external forces, a psychic transformation occurs; the natural becomes supernatural, the uncontrollable becomes flexible, and as a result, "we can breathe freely, can take comfort in the unseen, and can overcome our unreasonable anxieties by psychic means."

The human rights-based transgender ideology, initiated by Silicon Valley and activists in many countries, is actually damaging the younger generation. The uncertainty that often occurs among young people is not surprising, and it is growing rapidly. They understand spirituality through freedom and choose science as the basis for justifying their actions. Their actions demonstrate their conviction. Although they reject religion, they apparently need space for spirituality itself. Reflecting on this reality, we understand the importance of spirituality based on God's existence and His presence. This is because therapists themselves have little access to spiritual education based on God's revelation.

The theological-sociological boundaries regarding the secular world are formulated in such a way, referring to universal human experiences: our search for safety, our need for guidance through difficulty, our confrontation with mortality, and our desire for a life of contentment and belonging. These boundaries contain four human needs in the world: a. a sense of security, b. guidance in difficult times, c. confrontation with the transience of life, and d. the desire for a fulfilling life and a sense of belonging. In short, modern humans require internal motivation to carry out daily tasks and responsibilities.

Modernity is characterized by exploitation and alienation. Due to the power of capital, people work for wages, not intrinsic motivation. Bowles and Gintis's (1976) study of 237 high school students in New York concluded that work has a significant impact on school. This means that work itself fosters hope for a better future. Hannah Arendt, a philosopher and sociologist of the last century, saw the human journey in three phases. In these phases, each individual moves from the past to the present to move towards the future. However, there is one moment in human life that can thwart their journey towards the future: their rebellious nature (Hannah

Arendt, 1958/1998). This logical and precise description, linked to the spirituality of Psalm 23, is a primary need for modern humans in the 21st century. This description depicts the person of God as the shepherd of Israel and the Christian family in Jesus Christ. This sublimation of spiritual theology refers to God's providence, rest with Him, His authority and sovereignty, His redemption, His anointing, His mercy, and even eternal residence in God's house.

But Psalm 23 presents a distinct statement and attitude of faith. Based on the Hebrew text on the human journey, King David provides spiritual guidance while navigating life in uncertainty and metaphysical uprooting. Using what Hannah Arendt (1958/1998) alluded to with the term "complete unanimity," King David interprets this as a formulation of spirituality based on complete belief/faith. The formation of spirituality is as follows: a. Lectio (read), b. Meditate (meditation), c. Pray (oration), d. Contemplate (contemplation). Psalm 23 provides transformative spirituality for modern man today.

The outcome, in the form of spiritual attainment, of Psalm 23 directs the reader to a reorientation toward spirituality itself (God exists using the word "batach"), then a transformation of identity (God loves), a reframing of reality itself (facing challenging situations, but God is also present when they occur), and a growing sense of gratitude and satisfaction (trusting in God's provision). The focus is on Jesus, the good shepherd (cf. John 10:10 b). Rest with Jesus is the

key to family and individual spirituality.

In contemporary times, perhaps influenced by the surrounding culture and religious communities, this psalm is often included at funerals and in Yizkor (memorial) ceremonies. The metaphor of God's presence "in the valley of the shadow of death" (b'gey tzalmavet) is so lyrically compelling and fresh to contemporary ears that various end-of-life liturgies feel like a natural context.

Perhaps even more compelling is the Psalms' summary of the third Shabbat meal, se'udah shelishit, sung alongside other poems that guide individuals toward divinity not in philosophical reflection or covenant commandments, but in love and longing. In this context, the critical metaphor is "You have anointed my head with flowing oil," which suggests the fusion of physical and spiritual pleasures on Shabbat, and its final words, "and I will dwell in the Temple forever."

The grammar of our psalm reflects (anticipates) the profound shift between description and encounter that we also find in the structure of the blessing and in the poem. Its opening speaks of God in the third person, "The Lord is my Shepherd"; but in times of challenge, "in the valley of the shadow of death," the psalmist speaks not of God, but to God: "Atah imadi" (You are with me). This may be a more challenging poem than we first think. It is certainly lyrical, certainly about faith, but it is born of dark times in a challenging world. In fact, it is a very contemporary teaching from an ancient book. See the figure.1.

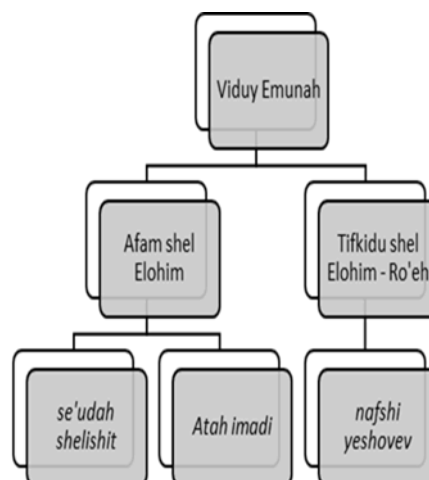


Figure 1: True Spirituality

The final hours of Shabbat look to the messianic future, to a time when all will be one. In the 'Amidah for the evening rest, the text speaks of the most profound serenity, evoking the deep and universal peace we long for in a busy and troubled world. The phrase "nafshi yeshovev" (You restored my soul) hangs enigmatically between the power of the weekly Shabbat to restore our spiritual life and the hope/promise of ultimate restoration in the messianic future. See Fig 1. David's initial depiction of the shepherd God is captured in Genesis 49:24. Jacob began his personal creed that God is the Shepherd and the solid Rock of Israel. Further development is seen in Jesus' own words, "Whoever hears My words is like one who builds his house on a solid rock." This imaginative and personal creed focuses on the person of God as the only Shepherd (cf. John 10:1; 10 b; 11; 14). Thus, for Jacob and David, God is the central figure in their life journeys. Furthermore, in Hebrews 13:2, Christ, the Great Shepherd of His people, provides a powerful perspective on how He Himself was raised from the dead by God through the blood of the new covenant, and that blood is eternal blood.

It is an important and fundamental basis for today's families to maintain a strong determination for God's presence in the midst of the family (cf. Jer 3:15), because Christ's redemption is for all and once for all (Hebrews 10:10). The theological basis is very emphasized amidst threats and agitation to abandon the essence of belief, namely the eternal blood atonement of Jesus for God's people. The protection of the blood is so historical and doctrinal that the family's journey can survive and move towards the finish line (cf. Hebrews 12:1). Families need to preserve the primacy of the Lord's Supper for all family members (cf. 1 Cor 10:23-26), both in the communal sense and in the nuclear family sense.

Next, God's role in the family. Judging from verses 2 and 3 of Psalm 23, David's use of the third-person pronoun reflects God's protection to its ultimate end. In this case, as God's family and His possession (Psalm 5:8, Proverbs 6:22; Proverbs 11:3; Psalm 67:4; Psalm 31:3). God loves and cares for the family to the point of guiding or leading it to a restored life. The goal is for the family to find true rest, and in this rest, the soul finds refreshment. Therefore, it can be said that verses 2 and 3 are an implementation of verse 1 and are a spiritual practice so that families experience restoration towards the right path. Because many families go astray due to anxiety and depressed souls, and

ultimately step on the wrong path. Verse 1 is the basis of covenant theology through the creed that God is the only shepherd, and verses 2-3 emphasize its pastoral aspect. Today's families need pastoral care to return to the right path for the sake of God's name, not any other name. In fact, the name of God was revealed by Jesus himself, and the name of God is called Father by the family.

In contrast, the name YHWH for the Israelites was so sacred and far from personal intimacy. The name YHWH (tetragrammaton in verse 1) seemed at the beginning of Israel's journey to have a distinction between God and His people. David, in his prophetic imagination, directed to the person of Christ to bridge the distinction by calling God the Father. Our Father who is in heaven. Thus, the implication is that God's role in creation and care is now fulfilled by Jesus as the shepherd of the people of the whole world (cf. John 10:16). And Jesus emphasized in John 10:17 that He and the Father are one and Jesus is always willing to give His life for God's flock and make God's name known to them (cf. John 17:1-3). An important aspect of the meaning of shepherding is the Shepherd's willingness to fulfill God's interests and His name.

Meanwhile, verse 4 itself specifically emphasizes God's presence amidst anxiety. This can occur because uncertainty and the phenomenon of change seem to threaten the lives we live. David describes this in light of the use of "Your rod and Your staff" as a comforting force for families today. Families need strengthening and comfort in areas that truly threaten their lives. And that domain lies in God's authority, while also providing resilience to withstand threats. Spiritual resilience is sourced in God's authority. While verses 1 discuss its theological basis, verses 2 and 3 address the pastoral or stewardship aspect, and verse 4 discusses God using his authority to protect his people. God is present in the metaphorical Valley of the Shadow of Darkness through his rod and staff, bringing true comfort.

In verse 5 itself, God's provision for the family is not interrupted but continuous. God reveals this provision before the enemies of believers. This is an area of real-life witness. And its purpose is to distinguish between those who worship and know God and those who do not. It is repeated with the phrase "God anoints with oil and fills the cup." These two affirmations come from God. His provision is accompanied by the anointing with oil and the filling of the cup, namely, the spiritual needs

of the family. God provides all of this for the believing family.

And in verse 6 is the aspect of life to come together with those who have become God's family. It is a joy to be able to meet with other family members in the house of God and worship the Lord together. The orientation of God's presence in the past in the lives of the fathers of faith is now present in the lives of believers, so that the future is a necessity. Verse 1 is the basis for justification for the true creed, verses 2 and 3 emphasize the pastoral side, verse 4 is God's certainty in the struggle in the midst of confirming that He has authority over life on this earth where the family lives, then verse 5 is devoted to providing God and His involvement in the lives of believers. By providing at least an area of life, testimony becomes real to outsiders through God's role in the communion, in the anointing of oil, and the filling of the cup to the brim. And ending in verse 6 is the eschatological side. The hope of living together in the dwelling of God's house forever.

The thematic scheme demonstrates the crucial role of the family in achieving its ultimate goals in the future. The components in the third row contain at least three sublime elements: first, prayer; second, spiritual formation; and third, the theology of spirituality for the family. By prioritizing these three elements, such as faith in prayer and confession, God's presence in the family, and spiritual recovery, the end result is salvation, survival, and a sense of security. And it is indicated that these three elements of spirituality implementation in the family are complementary movements towards joyful intensification (Robert Alter, 2003:231). The text of Psalm 23 is an important basis for looking at the person of Jesus in the Gospels, especially the Gospel of John. The emphasis on water, bread, life, and the good shepherd are strong image rooted in Psalm 23.

## VII. CONCLUSION

These findings indicate that Psalm 23 offers a consistent theological outline based on divine shepherding, care in the covenant, and hope in the eschaton, which can enable Christian families to withstand the eroding influence of secularization. Unlike cultural factors that disintegrate identity and undermine spiritual devotion, the Psalm underpins believers in the healing, directing, and cushioning presence of God. An important finding of the study is that, by focusing on a

historical-grammatical-Reformed Theological perspective of Psalm 23, one can identify a 3-fold process of spiritual growth: rest (v. 2), renewal (v. 3), and resilience (v. 4–6). This trend explains the ways in which family spirituality can be cultivated not only in habit but also in an enhanced consciousness of covenantal activity by God. It is also demonstrated in the paper that this divine shepherding is satisfied and enacted through the figure and work of the Lord Jesus Christ, whose redemptive mission on Calvary—once for all (Heb.S 10:10) is the source of Christian spiritual identity. It is this synthesis of the reading that makes up the original contribution of the article, as the Psalm 23 pastoral theology is intertwined with the family formation in a secular, pressured situation.

The concerns of Psalm 23 with Daniel 12 and its fulfillment in the Lord Jesus Christ. The connection between the instruments of well-being, the instruments of communication, and the metaphysical instruments lies in the conscience. Many aspects of information theory about God and the formation of the spirituality of a people/race/nation. Its description of knowledge of God's glory and wonders and the purification of nations extends ties over great geographical distances. Jesus' vision of the Gospel to the Nations (Matthew 20:16–20; Mark 16; Acts 1:8) is crucial for building a future community.

Thus, Psalm 23 and its fulfillment in the Canonical Gospels serve not only for individual restoration but also for the purification of a broader people. Correction of secularization's interference in the spirituality of God's people only occurs through correction of errors and purification. This results in the attainment of oneness with God for eternity. This means living in the light of the Gospel of the glory of the Lord Jesus Christ (Wanamaker, 182). Psalm 23 leads the nations to the light of Christ, both in His birth in the midst of the family, in His incarnational life, suffering until His death, and resurrection as Lord and King of kings (Acts 2:3–35; Revelation 4 and Revelation 5). The metaphysical dilemma alluded to by Francis Schaeffer has been resolved by Jesus on Calvary (Romans 3:23 ~ Romans 6:23). Not only metaphysical matters but also the existential problems of individuals, families, and nations are resolved.

The key is whether there is a recognition and willingness to rest with God and a belief in the future return of Christ as King. This is crucial considering that, with the passage of time, the

secularization of the modern world will eventually lead to its end. And who truly is the one who guarantees that final day?

## VIII. REFERENCES

- Pinto, Tiago and Helena Vilaça. "New Age and Environment: New Forms of Spirituality and Lifestyle in the Context of Secularization?" *Religions* 14, no. 4 (2023): 468.
- Harinck, George. "Abraham Kuyper's vision of a plural society as a Christian answer to secularization and intolerance." In *Secularization, desecularization, and toleration: Cross-disciplinary challenges to a modern myth*, pp. 115-133. Cham: Springer International Publishing, 2020.
- John Barton, *Biblical Interpretation*. UK: Cambridge University Press, 1998.
- Adeney, Bernard T. "Strange Virtues: Ethics in a Multicultural World." *Pro Ecclesia* 6, no. 3 (1997): 380-380.
- Shannon, Nathan D. "Herman and Johan Herman Bavinck on the Uniqueness of Christian Theism." *Mission Studies* 39, no. 1 (2022): 50-69.
- McGee, Robert. *The search for significance: Seeing your true worth through God's eyes*. Thomas Nelson, 2003.
- Destro, Adriana and Mauro Pesce. *From Jesus to his first followers: continuity and discontinuity: anthropological and historical perspectives*. Vol. 152. Brill, 2017.
- Os Guinness. *Re-Open the Windows: The Challenge of the Secular in Our Generation* (2025). Available at: <https://www.desiringgod.org/articles/re-open-the-windows>
- Watson, Rebecca S. "'Is Hall not Want'? A Psychological interpretation of Psalm 23."
- Smith, Christian, and Patricia Snell. *Souls in transition: The religious and spiritual lives of emerging adults*. Oxford University Press, 2009.
- Mujiono, John Gershom, Maria Titik Windarti, Kristian Handoyo Sugijarto, and Tony Andrean. "The Shepherd Model Based on Psalm 23 and Its Implementation for a Christian's Life." *European Journal of Theology and Philosophy* 4, no. 2 (2024): 19-28.
- Asumang, Annang. "The presence of the shepherd: a rhetographic exegesis of Psalm 23." *Conspectus: The Journal of the South African Theological Seminary* 9, no. 03 (2010): 1-24.
- Bible Hub. *Psalm 23:5. Chapter 23: Verse 5* Available at: <https://biblehub.com/psalms/23-5.htm#:~:text=Thou%20dost%20prepare%20a%20table,Good%20News%20Translation>
- Cortez, Félix H. "Reading Psalm 23 through Postmodern Eyes: Insights and Lessons for Missiologists." *Revisiting Postmodernism: An Old Debate in a New Era*.
- Gentile, Jesse. "Calvin's Theology of the Image of God: Five Ways It Informed His Pastoral Work."
- van den Brink, Gijsbert. "GC Berkouwer." In *T&T Clark Handbook Of Neo-Calvinism*, pp. 275-286. Hart Publishing, an imprint of Bloomsbury Publishing Plc, 2024.
- Pals, Daniel L. *Seven Theories of Religion: Tujuh Teori Agama Paling Berpengaruh*. IRCISOD, 2018.
- Xu, Ximian. "Theology as the Wetenschap of God: Herman Bavinck's scientific theology for the modern world." (2020).
- Mnguni-Motsoko, Nomsa Patricia. "A critical reflection on the doctrine of the Trinity in Jürgen Moltmann's The Crucified God with relation to human suffering and pain." (2017).
- Os Guinness. *Re-Open the Windows: The Challenge of the Secular in Our Generation* (2025). Available at: <https://www.desiringgod.org/articles/re-open-the-windows>
- Morgan, Jonathan Ross. *Religious engagement and varieties of self-regulation: broadening beyond belief and restraint*. Boston University, 2019.
- Koplitz, Michael Harvey. *Understanding Daniel*. Michael Koplitz. [https://www.researchgate.net/profile/Michael-Koplitz/publication/380300107\\_Discovering\\_Biblical\\_Treasures\\_UNDERSTANDING\\_DANIEL\\_A\\_commentary\\_using\\_Ancient\\_Bible\\_Study\\_Methods/links/6634d9e708aa54017ad5ebb1/Discovering-Biblical-Treasures-UNDERSTANDING-DANIEL-A-commentary-using-Ancient-Bible-Study-Methods.pdf](https://www.researchgate.net/profile/Michael-Koplitz/publication/380300107_Discovering_Biblical_Treasures_UNDERSTANDING_DANIEL_A_commentary_using_Ancient_Bible_Study_Methods/links/6634d9e708aa54017ad5ebb1/Discovering-Biblical-Treasures-UNDERSTANDING-DANIEL-A-commentary-using-Ancient-Bible-Study-Methods.pdf)
- Rendsburg, Gary A. "Israel without the Bible." *The Hebrew Bible: New Insights and Scholarship*. New York University Press, New York, NY (2008): 3-23.
- Brodie, Thomas L. *The Gospel According to John*. Oxford University Press, 1997.
- Kostičová, Zuzana Marie. "Religion, Spirituality, Worldviews, and Discourses: Revisiting the Term 'Spirituality' as Opposed to 'Religion'." *Central European Journal for Contemporary Religion* 2, no. 2 (2018): 81-97.

26. Wells, David F. No place for truth: Or whatever happened to evangelical theology?. Wm. B. Eerdmans Publishing, 1994.
27. Horton, Michael S. "What Are We Looking For in the Bible?" A Plea for Redemptive-Historical Preaching." *Modern Reformation* (1996).
28. Gibb, Iain. "Paul and the Psalms: Paul's hermeneutic and worldview." PhD diss., University of Glasgow, 2017.
29. McLean, Jack A. Dimensions in spirituality. Oxford: George Ronald, 1994.
30. Young, Caroline, and Cyndie Koopsen. Spirituality, health, and healing: An integrative approach. Jones & Bartlett Publishers, 2010.
31. Elghamry, Fadwa, and Sherin Darwish. "The Influence of Artificial Intelligence on Religion." (2024).
32. Wulff, David M. Psychology of religion: Classic and contemporary views. John Wiley & Sons, 1991.
33. Loewenthal, Kate M. The psychology of religion. Oxford: Oneworld Publications, 2000.
34. Searight, H. Russell. "The rise of Rogers' humanistic psychology and Skinnerian behaviorism in Mid-20th century America: The historical context of personality theory." *Psychological Specialties in Historical Context* (2016): 99.
35. Bingaman, Kirk Allen. Religious faith as psychological projection: Responses to Freud. Graduate Theological Union, 2000.
36. Taylor, Jami Kathleen, Donald P. Haider-Markel, and Daniel Clay Lewis. The remarkable rise of transgender rights. University of Michigan Press, 2018.
37. Campbell, Marie. "Postmodern challenges to theology: a study of sociological and hermeneutic factors in theological pluralism." PhD diss., Concordia University, 2003.
38. Bible Hub. Psalm 23:5. Chapter 23: Verse 5 Available at: <https://biblehub.com/psalms/23-5.htm#:~:text=Thou%20dost%20prepare%20a%20table,Good%20News%20Translation>
39. Our Lord, Jesus Christ. "Psalm 23." (2003).
40. Bible Hub. Psalm 23:5. Chapter 23: Verse 5 Available at: <https://biblehub.com/psalms/23-5.htm#:~:text=Thou%20dost%20prepare%20a%20table,Good%20News%20Translation>
41. Goitein, Shelomo Dov. "YHWH the Passionate: The monotheistic meaning and origin of the name YHWH." *Vetus Testamentum* 6, no. Fasc. 1 (1956): 1-9.
42. Kinney, Jill, David Haapala, and Charlotte Booth. Keeping families together: The Homebuilders model. Transaction Publishers, 1991.
43. Bird, Catherine. The Divine Heart of Darkness: Finding God in the Shadows. Sacristy Press, 2017.
44. Colijn, Brenda B. "Family in the Bible: A brief survey." *Ashland Theological Journal* 36 (2004): 73-84.
45. Katjuk Dhwi Waspodo, Katjuk Edward Sitepu, Slamet Triadi, Lasmawati Situmorang, and Saut Sihombing.
46. Using Anchor and Meaning Theory to Understand Human Suffering: Case Study of Conversation Text Luke 23: 39-43." *Enrichment: Journal of Multidisciplinary Research and Development* 2, no. 10 (2025).

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# The Relevance of Mexico's Mega Public Investments and Its Emphasis on the Rescue of Its Macrosouth Region: Towards a Paradigm Shift in the Face of the Prevailing Neoliberal Strategy

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## ABSTRACT

*In the current multipolar global context prevailing nowadays at the world level and the imperative of national-states, especially those from the periphery and emerging economies, to seek development alternatives beyond the neoliberal model (Washington's Consensus), encouraging social inclusion within their lagging economies by prioritizing growth, social inclusion, and sustainability. As shown by Mexico's recent emphasis on rescuing its Macro South region, a long-time neglected geostrategic and geoeconomic region by neoliberal regimes, which emphasized growth but neglected people's well-being and a sustainable environment for the sake of profit. Accordingly, this article aims at firstly analyze through pertinent indicators the prevailing asymmetry between Mexico's Macronorth versus Macrosouth regions to assess their asymmetric development, and secondly, Mexico's effort to revert such situation and rescuing the latter by encouraging its economic growth, social inclusion and sustainability through public funding infrastructure megaprojects such as the Mayan Train, the Tehuantepec Trans-Isthmic Corridor and the Dos Bocas Refinery, etc. already put into operation by Mexico.*

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## I. INTRODUCTION

In the first part (Part I), we start examining, through relevant socioeconomic and environmental indicators, the manifest asymmetry between the Macronorth regions (encompassing North, Northwest, Western, and Center economic regions) and the Macrosouth (encompassing Gulf, South-Pacific, and Southwest economic regions) in economic, social, and environmental outlook. In Part II, we briefly address the efforts of the Mexican government to rescue the long-time lagged Macrosouth region through public-funded large megaprojects channeled towards this macroregion, such as the Mayan Train and the Trans-Isthmus Corridor, aiming to diminish the asymmetry gap between the two above-referred macroregions along with regional economic strategy implemented by the past AMLO's Administration (Andrés Manuel López-Obrador) and continued by the present one led by president Claudia Sheinbaum, which seeks a paradigm shift focused on promoting economic growth with social inclusion for the first time in history oriented towards regional development with social inclusion for this geostrategic macroregion. The study horizon spans the period from 1980 to 2020.

## II. PART I: PREVAILING ASYMMETRY BETWEEN MACRONORTH VS MACROSOUTH

### Economic Outlook

To begin with, we briefly review the socioeconomic and environmental scenario in both of them. Through some indicators, on the economic side, namely, GDP, per capita, public, and foreign direct investment (FDI), and formal job generation in both macroregions, during the above-mentioned lapse in both macroregions.

### Macrosouth vs Macronorth.GDP's Outlook(1980-2020)

From the figures below, we appreciate the GDP behavior in the Macrosouth situation during the referred period according to INEGI (Mexican National Statistics Bureau) cited as a source underneath each of each table.

### Macrosouth.GDP's Outlook(1980-2020)

We proceed by examining the behavior of this important economic indicator in the Macrosouth region for the analysis during the study period:

| TABLA 1.1 MACRO-SUR PIB POR REGIONES (1980-2020) (MMDD, \$USD corrientes) |      |      |       |       |       |                 |
|---------------------------------------------------------------------------|------|------|-------|-------|-------|-----------------|
| Región                                                                    | 1980 | 1990 | 2000  | 2010  | 2020  | TMAC(1980-2020) |
| Golfo de México                                                           | 20.2 | 24.3 | 36.4  | 67.9  | 73.8  | 3.30%           |
| Pacífico Sur                                                              | 14.4 | 17.8 | 34.8  | 48.6  | 53.5  | 3.30%           |
| Sureste                                                                   | 21.6 | 25.4 | 38.6  | 92    | 95.5  | 3.80%           |
| Total Regional                                                            | 56.1 | 67.5 | 109.7 | 208.5 | 222.8 | 3.50%           |

FUENTES:  
 1. Elaboración propia a partir de datos de INEGI. Varios años.  
 2. INEGI:  
<https://inegi.org.mx/programas/pibent/2018/#tabulados>  
<https://inegi.org.mx/app/tabulados/default.aspx?pr=19&vr=1&in=1&tp=20&wr=1&cno=1&idrt=3260&opc=n>

From the previous information we observe the biggest absolute GDP value of 95.5 (thousands millions,US dollars) in the Macrosouth, is reported for the Southwestern region by the end of the period, 2020, growing at a pace of 3.8% yearly, likely for the public and private investment toward tourist industry around the Mayan Riviera during the last two decades. Following in second place comes the Gulf region (with 73.8 thousand US dollars),

which reports a strong dynamic growth (3.2%) during the last decade. Anyway, the average growth pace of the combined three regions reports an average rate of 3.5% during the analysis period.

### Macronorth GDP's Outlook (1980-2020)

To analyze the situation prevailing in the Macronorth, we use the data in the following table:

| TABLA 1.1 MACRO-NORTE PIB POR REGIONES (1980-2020) (MMDD, USD corrientes) |              |              |              |              |              |                 |
|---------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|-----------------|
| Región                                                                    | 1980         | 1990         | 2000         | 2010         | 2020         | TMAC(1980-2020) |
| Norte                                                                     | 36.4         | 46.9         | 145          | 211.4        | 217.7        | 4.60%           |
| Noroeste                                                                  | 27.2         | 34.2         | 51.8         | 102.7        | 108.9        | 3.50%           |
| Occidente                                                                 | 22.2         | 27.4         | 59.5         | 89.9         | 95.4         | 3.70%           |
| Centro                                                                    | 63.4         | 85.3         | 376          | 488.9        | 495.3        | 5.30%           |
| <b>Total Regional</b>                                                     | <b>149.2</b> | <b>193.8</b> | <b>632.3</b> | <b>892.9</b> | <b>917.3</b> | <b>4.60%</b>    |

FUENTES:  
 1. Elaboración propia a partir de datos de INEGI. Varios años.  
 2. INEGI:  
<https://inegi.org.mx/programas/pibent/2018/#tabulados>  
<https://inegi.org.mx/app/tabulados/default.aspx?pr=19&vr=1&in=1&tp=20&wr=1&cno=1&idrt=3260&opc=p>

Where it is evident that the GDP values of the Macrosouth's regions pale in comparison to the corresponding values of the Macronorth. For instance, the GDP reported for Central region overshadows those of the remaining three in the Macronorth, as its absolute GDP is almost 500 thousand mUSDs (495.3) growing at pace of 5.3% per year during the analysis lapse), followed far behind, in the second place by the Northern region with almost 218 thousand mUSDs, with a growth rate of 4.6% during the entire period.

In other words, there is a clear greater wealth concentration, both public and private investment, in the Central region, particularly in the last decade.

Altogether, the Macronorth shows the greatest income concentration compared to the Macrosouth region, explainable by the greater flow of investment to the former.

### GDP per capita. Macrosouth vs Macronorth (1980-2020)

Income per capita is a very important indicator to analyze when it comes to measuring the average income of inhabitants dwelling in a specific region or community. In our case between Macrosouth and Macronorth during our study period.

### GDP per capita. Macrosouth (1980-2020)

To examine this indicator for the Macrosouth region, by reviewing the figures reported in the following table:

| TABLA 1.2 MACRO-SUR PIB p.c.por Regiones (1980-2020)(\$USD corrientes) |              |              |               |               |               |                 |
|------------------------------------------------------------------------|--------------|--------------|---------------|---------------|---------------|-----------------|
| Región                                                                 | 1980         | 1990         | 2000          | 2010          | 2020          | TMAC(1980-2020) |
| Golfo de México                                                        | 143.9        | 299.5        | 598.6         | 809.6         | 958.4         | 4.90%           |
| Pacífico Sur                                                           | 147.7        | 306.8        | 759.4         | 895.4         | 997.2         | 4.90%           |
| Sureste                                                                | 139.6        | 287.5        | 498.8         | 790.1         | 925.7         | 4.80%           |
| <b>Total Regional</b>                                                  | <b>431.2</b> | <b>893.7</b> | <b>1856.8</b> | <b>2495.2</b> | <b>2881.3</b> | <b>4.90%</b>    |

FUENTES:  
 1. Elaboración propia a partir de datos de INEGI, Banco Mundial. Varios años. 2. INEGI:  
<https://www.cuentame.inegi.org.mx/economia/pibpc.aspx>  
<https://www.inegi.org.mx/temas/ifb/>  
<https://www.inegi.org.mx/temas/pib/>  
<https://cuentame.inegi.org.mx/economia/pibpc.aspx?tema=e>  
 3. Banco Mundial:  
<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

Observing that the per capita income of the Macrosouth regions, based on the data from the 2010-2020 period, shows a clear increase compared to previous decades, as the values by the end of the period (2020) are very similar for the three reported regions, with a growth rate close to 5% during the period. The reported per capita

values in the three regions are below, or near, a thousand dollars (US\$1,000.00) per year, compared to higher figures reported for the Macronorth regions, as we shall see below.

### GDP per capita. Macronorth (1980-2020)

Regarding the income per capita prevailing in the Macronorth, we take advantage of the data

reported in the following table for the four regions for the analysis period.

| TABLA 1.2 MACRO-NORTE PIB p.c.por Regiones (1980-2020)(\$USD corrientes) |               |               |               |               |               |                 |
|--------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Región                                                                   | 1980          | 1990          | 2000          | 2010          | 2020          | TMAC(1980-2020) |
| Norte                                                                    | 463.4         | 784.2         | 1009.9        | 1392.6        | 1568.8        | 3.10%           |
| Noroeste                                                                 | 251           | 562.2         | 864.7         | 996.8         | 1167.5        | 3.90%           |
| Occidente                                                                | 279.9         | 416           | 682.5         | 885.3         | 1019.5        | 3.30%           |
| Centro                                                                   | 871           | 1589.5        | 1899.5        | 2160          | 2390.9        | 2.60%           |
| <b>Total Regional</b>                                                    | <b>1865.3</b> | <b>3351.8</b> | <b>4456.6</b> | <b>5434.6</b> | <b>6146.8</b> | <b>3.00%</b>    |

FUENTES:  
 1. Elaboración propia a partir de datos de INEGI, Banco Mundial. Varios años. 2. INEGI:  
<https://www.cuentame.inegi.org.mx/economia/pibpc.aspx>  
<https://www.inegi.org.mx/temas/ifb/>  
<https://www.inegi.org.mx/temas/pib/>  
<https://cuentame.inegi.org.mx/economia/pibpc.aspx?tema=e>  
 3. Banco Mundial:  
<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

It results from the above information that per capita incomes of the Macronorthern regions manifest a stark contrast to the corresponding Macrosouth regions. This is especially evident for the Northern, Northwest, Western, and Central regions.

For instance, it is noteworthy that the Central Region reports the highest per capita income among all the regions in this macroregion, with a value of almost US\$2,391 (US\$2,390.9), with an average annual growth rate of 2.6%, followed, in second place, by the Northern Region with US\$1,569 (US\$1,568.8), with a growth rate of 3.1%. In third place is the Northwest with US\$1,168 (US\$1,167.5), growing at a pace of 3.9% per annum, and in fourth and last place is the Western Region with US\$1,019 (US\$1,019.5, with an average annual rate of 3.3% during the analysis horizon.

All the above findings entail that the regions with the greatest concentration of wealth are located in the Macronorth region, namely the Central and North regions.

This explains the strong immigration flow of the labor force toward these two regions, coming from within Mexico and from abroad, namely, Central and South America.

#### Public Investment. Macrosouth vs. Macronorth (1980-2020)

A key factor that explains the emphasis placed by the Mexican government on the growth of one region over another through time is federal investment in the macroregions analyzed.

#### Public Investment. Macrosouth (1980-2020)

To analyze this situation, we proceed by examining what happened in Macrosouth regarding this variable during the time horizon of analysis. To get this accomplished, we use the figures in the following table, which reports the figures of public investment in both macroregions during 1980-2020.

| TABLA 1.4 MACRO-SUR Inversión Pública Total por Regiones (1980-2020) (mmdUS\$dls corrientes) |            |            |            |            |            |                  |
|----------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------------|
| Región                                                                                       | 1980       | 1990       | 2000       | 2010       | 2020       | TMAC (1980-2020) |
| Golfo de México                                                                              | 0.3        | 0.3        | 0.7        | 1.2        | 1.5        | 3.90%            |
| Pacífico Sur                                                                                 | 0.1        | 0.1        | 0.3        | 1.1        | 1.3        | 6.50%            |
| Sureste                                                                                      | 0          | 0          | 0.2        | 0.3        | 0.9        | 8.90%            |
| <b>Total Regional</b>                                                                        | <b>0.5</b> | <b>0.5</b> | <b>1.2</b> | <b>2.6</b> | <b>3.6</b> | <b>6.40%</b>     |

FUENTES:  
 1. Elaboración propia a partir de datos de INEGI, Secretaría de Economía, SHCP. Varios años.  
 2. INEGI:  
[https://www.inegi.org.mx/sistemas/olap/proyectos/bd/continuas/finanzas\\_publicas/fpmun.asp?s=est&c=11289&proy=efipem\\_fmum](https://www.inegi.org.mx/sistemas/olap/proyectos/bd/continuas/finanzas_publicas/fpmun.asp?s=est&c=11289&proy=efipem_fmum)  
<https://www.inegi.org.mx/programas/finanzas/>  
<https://datos.gob.mx/busca/dataset/mexico-prospero-estadisticas-por-entidad-federativa>  
 3. SHCP:  
[https://www.finanzaspublicas.hacienda.gob.mx/work/models/Finanzas\\_Publicas/docs/congreso/fp/2010/FP\\_201001.pdf](https://www.finanzaspublicas.hacienda.gob.mx/work/models/Finanzas_Publicas/docs/congreso/fp/2010/FP_201001.pdf)  
 4. CEFEP:  
<https://www.cefp.gob.mx/publicaciones/documento/2019/cefp0192019.pdf>

From the previous data, it is evident that the Gulf region has consistently held the largest share in the whole region and taken the lead in federal investment over time, with an average growth rate of nearly 4% and followed closely in second place by the South-Pacific region with a value of US\$1.3 billion. In third place comes the Southeast region, with less than US\$1 billion, but with a high pace rate of nearly 9% over the period.

This region is also experiencing dynamic expansion during the analysis period.

This region comprises the Mayan zone (Yucatán, Quintana Roo, and Campeche), and strong federal investments focused on the tourist industry.

#### Public Investment. Macronorth (1980–2020)

On the other hand, concerning public investment channeled toward the Macronorth region, versus the situation observed in the Macrosouth region, we use data from the following table:

| Región                | 1980       | 1990       | 2000       | 2010     | 2020        | TMAC (1980-2020) |
|-----------------------|------------|------------|------------|----------|-------------|------------------|
| Norte                 | 0.2        | 0.2        | 0.7        | 2.9      | 4.3         | 7.80%            |
| Noroeste              | 0.1        | 0.1        | 0.3        | 0.6      | 1           | 5.50%            |
| Occidente             | 0.1        | 0.1        | 0.3        | 0.9      | 1.2         | 5.50%            |
| Centro                | 1          | 1          | 0.9        | 2.6      | 5.1         | 4.30%            |
| <b>Total Regional</b> | <b>1.4</b> | <b>1.4</b> | <b>2.1</b> | <b>7</b> | <b>11.6</b> | <b>5.40%</b>     |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI, Secretaría de Economía, SHCP. Varios años.  
 2. INEGI:  
[https://www.inegi.org.mx/sistemas/olap/proyectos/bd/continuas/finanzaspublicas/fpmun.asp?s=est&c=11289&proy=fipen\\_fmum](https://www.inegi.org.mx/sistemas/olap/proyectos/bd/continuas/finanzaspublicas/fpmun.asp?s=est&c=11289&proy=fipen_fmum)  
<https://www.inegi.org.mx/programas/finanzas/>  
<https://datos.gob.mx/busca/dataset/mexico-prospero-estadisticas-por-entidad-federativa>  
 3. SHCP:  
[https://www.finanzaspublicas.hacienda.gob.mx/work/models/Finanzas\\_Publicas/docs/congreso/fp/2010/FP\\_201001.pdf](https://www.finanzaspublicas.hacienda.gob.mx/work/models/Finanzas_Publicas/docs/congreso/fp/2010/FP_201001.pdf)  
 4. CEFPE:  
<https://www.cefp.gob.mx/publicaciones/documento/2019/cefp0192019.pdf>

From the above data, we can observe that Mexico has placed greater emphasis on its Central Region (US\$5.1 billion) by the end of the period, with a growth rate of 4.3%, followed in second place by the Northern Region (US\$4.3 billion), growing at an impressive pace of 7.8% annually. This exceeds the growth rate of the rest of the regions and that of the entire Macronorth region (4.3%) during the analysis period.

Accordingly, public investment by the Mexican federal government clearly emphasizes support for the Macronorth region, and in particular, for the Central Region, and secondarily for the North Region, although the latter reported greater dynamism during the analysis period. Behaviour which is understandable given its proximity to the United States and the foreign investment

channeled to border states, particularly toward the export maquiladora industry.

#### Foreign Direct Investment (FDI). Macrosouth vs. Macronorth (1980–2020)

As an important complement to public investment earlier examined, it is important to consider the behavior of foreign direct investment (FDI) as a key variable that explains the growth of both macroregions during the study period.

#### Foreign Direct Investment (FDI). Macrosouth (1980–2020)

To accomplish this purpose, we start by examining the behavior of this variable for Macrosouth, based on the data in the following table:

| Región                | 1980        | 1990        | 2000        | 2010        | 2020        | TMAC(1980-2020) |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| Golfo de México       | 0.01        | 0.01        | 1.41        | 2.42        | 2.76        | 16.40%          |
| PacíficoSur           | 0.01        | 0.02        | 0.37        | 0.68        | 1.16        | 13.80%          |
| Sureste               | 0.01        | 0.01        | 0.31        | 0.55        | 1.32        | 14.80%          |
| <b>Total Regional</b> | <b>0.02</b> | <b>0.04</b> | <b>2.09</b> | <b>3.65</b> | <b>5.24</b> | <b>15.20%</b>   |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI, Banco Mundial. Varios años. 2. INEGI:  
<https://www.cuentame.inegi.org.mx/economia/pibpc.aspx>  
<https://www.inegi.org.mx/temas/fib/>  
<https://www.inegi.org.mx/temas/pib/>  
<https://cuentame.inegi.org.mx/economia/pibpc.aspx?tema=e>  
 3. Banco Mundial:  
<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

From the outset, we observe that the Gulf region has the highest absolute value in terms of foreign capital (US\$2.76 billion), followed far behind by the Southeast region (US\$1.32 billion), and in third and last place by the South Pacific region (US\$1.16 billion). The Gulf region observed the most dynamic growth during the period (16.4%), followed by the Southeast region (14.8%), and thirdly by the

South-Pacific region (13.8%) during the period.

However, regarding the historical behavior of FDI in the Macrosouth, it pales in comparison to that observed in the Macronorth, based on the figures reported in the following table:

| TABLA 1.3 MACRO-NORTE Inversión Extranjera Directa por Regiones<br>((\$MMD\$USDLLs)) |             |             |              |              |              |                 |
|--------------------------------------------------------------------------------------|-------------|-------------|--------------|--------------|--------------|-----------------|
| Región                                                                               | 1980        | 1990        | 2000         | 2010         | 2020         | TMAC(1980-2020) |
| Norte                                                                                | 0.39        | 0.55        | 4.94         | 9.01         | 10.95        | 8.70%           |
| Noroeste                                                                             | 0.07        | 0.1         | 1.91         | 3.28         | 3.79         | 10.30%          |
| Occidente                                                                            | 0.01        | 0.11        | 0.01         | 0.98         | 1.68         | 14.20%          |
| Centro                                                                               | 2.5         | 2.91        | 9.3          | 10.41        | 12.81        | 4.20%           |
| <b>Total Regional</b>                                                                | <b>2.97</b> | <b>3.67</b> | <b>16.16</b> | <b>23.68</b> | <b>29.23</b> | <b>5.90%</b>    |

FUENTES:  
1. Elaboración propia a partir de datos de INEGI, Banco Mundial. Varios años. 2. INEGI:  
<https://www.cuentame.inegi.org.mx/economia/pibpc.aspx>  
<https://www.inegi.org.mx/temas/ifb/>  
<https://www.inegi.org.mx/temas/pib/>  
<https://cuentame.inegi.org.mx/economia/pibpc.aspx?tema=e>  
3. Banco Mundial:  
<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

Where we notice that FDI focused to the Central region by the end of the period reaches nearly US\$13.0 billion (a rate of 4.2%), closely followed by the Northern region, in second place, at nearly US\$11.0 billion (with a rate of 8.7%), and far behind, in third place, the Northwest region (US\$3.79 billion) (with a yearly rate of 10.3%), and in fourth and last place, the Western region (US\$1.68 billion) (with a 1.68% ) during the period.

#### Formal Employment. Macrosouth vs. Macronorth (1980–2020)

Concerning formal employment between the two macroregions, we present below an overview of job generation in the Macrosouth during 1980–2020 through the following table.

#### Formal Employment. Macrosouth (1980–2020)

From the table below we present an overview of job generation (in millions of people) in each of the three regions encompassed in the Macrosouth during 1980–2020:

| TABLA 1.6 MACRO-SUR Población trabajadora Formal por Regiones<br>(1980-2020) (millones personas) |            |            |            |            |            |                  |
|--------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------------|
| Región                                                                                           | 1980       | 1990       | 2000       | 2010       | 2020       | TMAC (1980-2020) |
| Golfo de México                                                                                  | 1          | 1.2        | 1.4        | 1.6        | 1.4        | 0.80%            |
| Pacífico Sur                                                                                     | 0.4        | 0.5        | 0.6        | 0.8        | 0.9        | 2.10%            |
| Sureste                                                                                          | 0.3        | 0.4        | 0.6        | 0.7        | 0.6        | 2.10%            |
| <b>Total Regional</b>                                                                            | <b>1.7</b> | <b>2.1</b> | <b>2.6</b> | <b>3.1</b> | <b>2.9</b> | <b>1.40%</b>     |

FUENTES:  
1. Elaboración propia a partir de datos de INEGI. Varios años.  
2. INEGI:  
<https://www.inegi.org.mx/temas/estructura/>  
<https://www.inegi.org.mx/app/cpv/2020/resultadosrapidos/default.html>  
[https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2021/iooe/iooe2021\\_03.pdf](https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2021/iooe/iooe2021_03.pdf)

It can be appreciated that the Gulf region of the Macrosouth region, by the end of 2020, is the largest job generator, with almost one and a half million jobs (1.4 million), growing at a slightly over 1%

annual average rate. The South Pacific and Southeast regions, in second and third place, with 0.9 and 0.6 million people, respectively, and an average annual growth rate of 2.1%. This indicates

that, despite these two regions generating fewer jobs in absolute terms (less than one million jobs by the end of the period), their growth rate is very high, indicating their dynamic economic expansion.

On the Macronorth side, as a job generator of formal jobs, we use the data reported in the following table.

| TABLA 1.6 MACRO-NORTE Población trabajadora Formal por Regiones (1980-2020) (millones personas)                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |      |      |      |      |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------------------|
| Región                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1980 | 1990 | 2000 | 2010 | 2020 | TMAC (1980-2020) |
| Norte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2    | 2.5  | 3.2  | 3.5  | 2.4  | 0.50%            |
| Noroeste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.9  | 1.2  | 1.6  | 1.8  | 1.3  | 0.80%            |
| Occidente                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.9  | 1.2  | 1.6  | 2    | 1.8  | 1.70%            |
| Centro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3.6  | 4.6  | 6    | 6.8  | 5.9  | 1.20%            |
| Total Regional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 7.4  | 9.6  | 12.3 | 14.1 | 11.4 | 1.10%            |
| <b>FUENTES:</b><br>1. Elaboración propia a partir de datos de INEGI. Varios años.<br>2. INEGI:<br><a href="https://www.inegi.org.mx/temas/estructura/">https://www.inegi.org.mx/temas/estructura/</a><br><a href="https://www.inegi.org.mx/app/cpv/2020/resultadosrapidos/default.html">https://www.inegi.org.mx/app/cpv/2020/resultadosrapidos/default.html</a><br><a href="https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2021/iooe/iooe2021_03.pdf">https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2021/iooe/iooe2021_03.pdf</a> |      |      |      |      |      |                  |

From the previous table is noteworthy that the Central region, by the end of the period, becomes the largest job generator of formal jobs in the macroregion, with nearly six million jobs (5.9) at the end of the period, with an average annual rate of slightly above 1% (1.2%), followed, in second place, far behind, by the Northern region, with nearly two and a half million jobs (2.4) growing at an average annual rate of 0.5%. In third and fourth place, in order of importance, we have the Western region (1.8%), the Northwest region (1.3%) at a growth rate of 0.7%, and the Northeast region with an annual average rate of 0.8%, respectively.

Accordingly, the Macronorth region is the main generator of formal jobs in Mexico, while the Macrosouth region remains lagging behind both in domestic and foreign investment throughout the analysis period. Situation that largely explains the background of Southern to Northern migration toward Macronorth and its regions and entities within this macroregion of the country.

### Economic Outlook's Preliminary Conclusions:

The above economic indicators just examined reveal the emphasis placed by all past regimes throughout almost the entire period under analysis, prioritizing growth at all cost-policy focusing in boosting domestic and foreign capital profits in the country, with disregard to population's social well-being and environmental implications which come accompanied by multiple externalities such as the asymmetry fostered between the two macroregions. For the same token, the exclusionary policies implemented by past regimes throughout

the entire period under analysis are felt within the states and municipalities that comprise them.

On another hand, as an expected consequence of the observed high concentration of investment in the Macronorth region, it results in greater growth and higher job creation in this region as opposed to the lagging situation in the Macrosouth. Which explains the ongoing exodus of labor from south to north in search of formal employment, but this situation has also led to a series of socioeconomic regional imbalances throughout the study period, particularly in the border region, such as industrial and human overcrowding, and environmental and socioeconomic externalities around US-Mexico border states, which seems to mimic in the Central region as we shall see later.

However, the above neoliberal strategy and its implications all the referred regions and the whole country openly clash with the one adopted by the new Mexican regimes since AMLO's administration, and continued by the current president, Claudia Sheinbaum. With a nationalistic and leftist leanings, backed with unprecedented strong social support, advocates a new economic strategy in Mexico, far from Washington's Consensus neoliberal stance, aiming at gradually diminishing income inequality and prevailing regional asymmetry in the country, favoring social inclusion and sustainable development throughout the country, particularly between the two macroregions.

### Social Outlook

In this section, we will consider only the following social indicators: population, Gini coefficient, and HDI (Human Development Index) for the two macroregions involved in our current analysis. Starting by examining the population behavior in the Macrosouth region during the analysis period.

### Total Population. Macrosouth vs Macronorth (1980-2020)

### Total Population. Macrosouth Region (1980-2020)

Let's examine the prevailing population situation in the Macrosouth Region according to the figures reported in the following table, in millions of inhabitants, during our analysis period

| Región                | 1980        | 1990        | 2000        | 2010        | 2020        | TMAC (1980-2020) |
|-----------------------|-------------|-------------|-------------|-------------|-------------|------------------|
| Golfo de México       | 8.4         | 10          | 11.6        | 13.2        | 14          | 1.30%            |
| Pacífico Sur          | 6.6         | 8.9         | 10.4        | 12          | 13.2        | 1.80%            |
| Sureste               | 1.7         | 2.4         | 3.2         | 4.1         | 5.1         | 2.80%            |
| <b>Total Regional</b> | <b>16.6</b> | <b>21.2</b> | <b>25.2</b> | <b>29.2</b> | <b>32.3</b> | <b>1.70%</b>     |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI. Varios años.  
 2. INEGI:  
<https://www.inegi.org.mx/sistemas/Olap/Proyectos/bd/censos/cpv2020/pt.asp>  
[https://www.inegi.org.mx/sistemas/olap/consulta/general\\_ver4/MDXQueryDatos.asp?proy=](https://www.inegi.org.mx/sistemas/olap/consulta/general_ver4/MDXQueryDatos.asp?proy=)  
[https://apps1.semarnat.gob.mx:8443/dgeia/compendio\\_2014/dgeiawf.semarnat.gob.mx\\_8080/bi\\_apps/WFServlet3cef.html](https://apps1.semarnat.gob.mx:8443/dgeia/compendio_2014/dgeiawf.semarnat.gob.mx_8080/bi_apps/WFServlet3cef.html)  
[https://www.inegi.org.mx/programas/ccpv/1980/tabulados/cpyv80\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/1980/tabulados/cpyv80_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/1990/tabulados/cpyv90\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/1990/tabulados/cpyv90_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/2000/tabulados/cpyv2000\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/2000/tabulados/cpyv2000_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/2010/tabulados/cpyv2010\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/2010/tabulados/cpyv2010_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/2020/tabulados/cpyv2020\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/2020/tabulados/cpyv2020_nal_poblacion.xlsx)

From the figures of the previous table, it becomes clear that the Gulf region leads the Macrosouth in population by the end of the period, totalling 14.0 million people, growing at an annual rate of 1.3%. Closely followed in second place by the South Pacific region with just over 13.0 million inhabitants by 2020 (13.2 million), at a pace of 1.8%, faster than the Gulf region (1.3%). In third place, and far below the first two in population, is the Southeast region with only 5 million people, although growing at a pace close to 3% (2.8%) throughout the period.

The above situation entails a dynamic population growth in the Macrosouth, particularly

the medium-term trend in the Gulf and South Pacific regions. Explainable for the growing interest toward this macroregion, as a consequence of greater emphasis of public and FDI investments toward the touristic industry located in the Mayan zone and oil industry and, more recently, toward Mayan and Transismic corridor megaprojects.

### Total Population. Macronorth Region (1980-2020)

To examine the population overview of the Macronorth, from the figures reported in the following table, which covers our analysis period and compares it with the prevailing situation in the Macrosouth region, previously discussed.

| Región                | 1980        | 1990      | 2000        | 2010        | 2020        | TMAC (1980-2020) |
|-----------------------|-------------|-----------|-------------|-------------|-------------|------------------|
| Norte                 | 10.6        | 12.9      | 15.2        | 17.7        | 20.4        | 1.70%            |
| Noroeste              | 4.8         | 6         | 7.7         | 9.2         | 10.5        | 2.00%            |
| Occidente             | 8.3         | 10.1      | 11.8        | 13.4        | 15.1        | 1.50%            |
| Centro                | 26.5        | 31.1      | 37.6        | 42.7        | 47.7        | 1.50%            |
| <b>Total Regional</b> | <b>50.2</b> | <b>60</b> | <b>72.3</b> | <b>83.1</b> | <b>93.7</b> | <b>1.60%</b>     |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI. Varios años.  
 2. INEGI:  
<https://www.inegi.org.mx/sistemas/Olap/Proyectos/bd/censos/cpv2020/pt.asp>  
[https://www.inegi.org.mx/sistemas/olap/consulta/general\\_ver4/MDXQueryDatos.asp?proy=](https://www.inegi.org.mx/sistemas/olap/consulta/general_ver4/MDXQueryDatos.asp?proy=)  
[https://apps1.semarnat.gob.mx:8443/dgeia/compendio\\_2014/dgeiawf.semarnat.gob.mx\\_8080/bi\\_apps/WFServlet3cef.html](https://apps1.semarnat.gob.mx:8443/dgeia/compendio_2014/dgeiawf.semarnat.gob.mx_8080/bi_apps/WFServlet3cef.html)  
[https://www.inegi.org.mx/programas/ccpv/1980/tabulados/cpyv80\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/1980/tabulados/cpyv80_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/1990/tabulados/cpyv90\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/1990/tabulados/cpyv90_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/2000/tabulados/cpyv2000\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/2000/tabulados/cpyv2000_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/2010/tabulados/cpyv2010\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/2010/tabulados/cpyv2010_nal_poblacion.xlsx)  
[https://www.inegi.org.mx/programas/ccpv/2020/tabulados/cpyv2020\\_nal\\_poblacion.xlsx](https://www.inegi.org.mx/programas/ccpv/2020/tabulados/cpyv2020_nal_poblacion.xlsx)

It should be noted from the above information, that the bulk of Mexican population is concentrated in the Macronorth region, namely around the Center Region (comprising the states of Mexico City, state of Mexico, Puebla, Tlaxcala, Querétaro, Guanajuato, Hidalgo, and Morelos), which will englobe almost half of the national population by 2020 (47.7 million people), growing yearly at a pace of 1.5%. This region is followed in second place by the Northern region with 20.4 million people and growing at a pace of 1.7%. The Western region is in third place with 15.1 million people (at a pace of 1.5%), and the Northwest region is in fourth and last place with 10.5 million inhabitants (at a pace of 2.0%).

The high human and urban concentration in this macroregion results explainable in light of the substantial public and foreign investments focused into this macroregion, which can also be explained by the ongoing immigration of the labor force from the south to the north within the Mexican territory. Capital flows, comprising both domestic and foreign, to the various entities encompassed in the

Macronorth, particularly the Central and Northern regions of the country, as highlighted previously. This situation makes it a powerful magnet for the flow of labor from south to north and explains the concentration of urban, social, and myriad socioeconomic and environmental externalities associated with this phenomenon within this macroregion.

#### Gini Coefficient. Macrosouth vs Macronorth (1980-2020)

An essential indicator in this analysis, allowing us to understand income distribution among a population, in this case, Mexican families who live in both macroregions, is the Gini coefficient. To begin with, the Macrosouth region during the study period.

#### GINI Coefficient. Macrosouth (1980-2020)

We start reviewing the prevailing situation in the Macrosouth region for the analysis period, based on the figures reported in the following table

| TABLA 2.2 MACRO-SUR Coeficiente de Gini por Regiones (1980-2020)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |      |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|-----------------|
| Región                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1980 | 1990 | 2000 | 2010 | 2020 | TMAC(1980-2020) |
| Golfo de México                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.57 | 0.54 | 0.54 | 0.46 | 0.43 | -0.70%          |
| Pacífico Sur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.58 | 0.53 | 0.55 | 0.5  | 0.44 | -0.60%          |
| Sureste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.61 | 0.52 | 0.57 | 0.45 | 0.43 | -0.90%          |
| Promedio Regional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.58 | 0.53 | 0.55 | 0.47 | 0.43 | -0.80%          |
| <b>FUENTES:</b><br>1. Elaboración propia a partir de datos de CEPAL, CONEVAL. Varios años.<br>2. CEPAL: <a href="https://repositorio.cepal.org/bitstream/handle/11362/47671/1/S2100989_es.pdf">https://repositorio.cepal.org/bitstream/handle/11362/47671/1/S2100989_es.pdf</a><br>3. CONEVAL: <a href="https://www.coneval.org.mx/Medicion/MP/Paginas/AE_pobreza_2018.aspx">https://www.coneval.org.mx/Medicion/MP/Paginas/AE_pobreza_2018.aspx</a><br><a href="http://dgeiawf.semarnat.gob.mx:8080/ibi_apps/WFServlet?IBIF_ex=D1_POBREZA01_27&amp;BIC_user=dgeia_mce&amp;IBIC_pass=dgeia_mce&amp;NOMBREENTIDAD=*%&amp;NOMBREANIO=*">http://dgeiawf.semarnat.gob.mx:8080/ibi_apps/WFServlet?IBIF_ex=D1_POBREZA01_27&amp;BIC_user=dgeia_mce&amp;IBIC_pass=dgeia_mce&amp;NOMBREENTIDAD=*%&amp;NOMBREANIO=*</a><br><a href="https://www.coneval.org.mx/Informes/Pobreza/Evolucion_Dimensiones/Evolucion_pobreza_ingresos_1990_2010.zip">https://www.coneval.org.mx/Informes/Pobreza/Evolucion_Dimensiones/Evolucion_pobreza_ingresos_1990_2010.zip</a> |      |      |      |      |      |                 |

It is clear that by the end of the period, there exists a marked income inequality in all the regions involved. Explainable by the low standards of living and per capita income in this macroregion, resulting from poor wealth distribution within the entities encompassed in this macroregion, such as the Gulf, South Pacific, and Southeast regions. Despite a slight improvement observed by the end of the period, improvement that does not exceed an annual average of 1% throughout the period compared to its 1980 value. In any case, the situation in Macrosouth regarding income inequality paints a dismal picture.

#### GINI Coefficient. Macronorth (1980-2020)

To examine the behavior of the Gini coefficient for the Macronorth, i.e., the "richest region," we use the data from the table below, which reports the Gini coefficient for all the four regions encompassed in this macroregion for our analysis period:

| TABLA 2.2 MACRO-NORTE Coeficiente de Gini por Regiones (1980-2020) |      |      |      |      |      |                 |
|--------------------------------------------------------------------|------|------|------|------|------|-----------------|
| Región                                                             | 1980 | 1990 | 2000 | 2010 | 2020 | TMAC(1980-2020) |
| Norte                                                              | 0.53 | 0.51 | 0.49 | 0.43 | 0.41 | -0.60%          |
| Noroeste                                                           | 0.52 | 0.5  | 0.47 | 0.41 | 0.39 | -0.70%          |
| Occidente                                                          | 0.61 | 0.55 | 0.51 | 0.45 | 0.41 | -1.00%          |
| Centro                                                             | 0.59 | 0.53 | 0.52 | 0.45 | 0.42 | -0.80%          |
| Promedio Regional                                                  | 0.56 | 0.52 | 0.5  | 0.44 | 0.41 | -0.80%          |

FUENTES:  
 1. Elaboración propia a partir de datos de CEPAL, CONEVAL. Varios años.  
 2. CEPAL: [https://repositorio.cepal.org/bitstream/handle/11362/47671/1/S2100989\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/47671/1/S2100989_es.pdf)  
 3. CONEVAL: [https://www.coneval.org.mx/Medicion/MP/Paginas/AE\\_pobreza\\_2018.aspx](https://www.coneval.org.mx/Medicion/MP/Paginas/AE_pobreza_2018.aspx)  
[http://dgeiawf.semarnat.gob.mx:8080/ibi\\_apps/WFServlet?IBIF\\_ex=D1\\_POBREZA01\\_27&IBIC\\_user=dgeia\\_mce&IBIC\\_pass=dgeia\\_mce&NOMBREENTIDAD=&NOMBREANIO=](http://dgeiawf.semarnat.gob.mx:8080/ibi_apps/WFServlet?IBIF_ex=D1_POBREZA01_27&IBIC_user=dgeia_mce&IBIC_pass=dgeia_mce&NOMBREENTIDAD=&NOMBREANIO=)  
[https://www.coneval.org.mx/Informes/Pobreza/Evolucion\\_Dimensiones/Evolucion\\_pobreza\\_ingresos\\_1990\\_2010.zip](https://www.coneval.org.mx/Informes/Pobreza/Evolucion_Dimensiones/Evolucion_pobreza_ingresos_1990_2010.zip)

From the previous information we realize that the situation prevailing over time in the Macronorth does not appear to differ a great deal from that observed in the Macrosouth discussed above. We observe that income distribution among the population in this region, considered the "richest" region in the country, is highly unequal, judging by the Gini coefficients reported for all regions and at the regional average, which are the same as we observe in the Macrosouth.

In short, the economic boom manifested in the Macronorth, both in terms of GDP and per capita, is not reflected at the household level or among the population of this macroregion. In other words, it does not translate into a higher standard among their populations of the states that make up the Macronorth region, and maintains the same unfair distribution observed in its counterpart, the Macrosouth. This is a clear indication or reflection of the structure of a socially non-inclusive neoliberal economic model prevalent in Mexico during the analysis in the country, which emphasized growth but neglected social well-being for the population.

### Human Development Index (HDI). Macrosouth vs. Macronorth (1980-2020)

Finally, it is also important to consider the behavior of the HDI index in both macroregions in our analysis to ascertain the quality and standard of living of their populations. This international indicator is important because it encompasses other important aspects in addition to the per capita income of a nation or economy, such as educational level and life expectancy (longevity). This indicator was established by the UN to differentiate a country's social well-being and allows it to establish its degree of backwardness or progress (low, medium, and high, human development).

### Human Development Index(HDI). Macrosouth (1980-2020)

Under this premise, we first analyze what is happening in the Macrosur region during our analysis period using the data in the table reported below:

| TABLA 2.3 MACRO-SUR Índice de Desarrollo Humano (IDH) Armonizado por Regiones (1980-2020) |      |        |      |        |        |                 |
|-------------------------------------------------------------------------------------------|------|--------|------|--------|--------|-----------------|
| Región                                                                                    | 1980 | 1990   | 2000 | 2010   | 2020   | TMAC(1980-2020) |
| Golfo de México                                                                           | 0.7  | 0.75   | 0.72 | 0.72   | 0.76   | 0.20%           |
| Pacífico Sur                                                                              | 0.59 | 0.74   | 0.67 | 0.67   | 0.76   | 0.60%           |
| Sureste                                                                                   | 0.69 | 0.77   | 0.68 | 0.73   | 0.78   | 0.30%           |
| Promedio Regional                                                                         | 0.66 | 0.7533 | 0.69 | 0.7067 | 0.7667 | 0.40%           |

FUENTES:  
 1. Elaboración propia a partir de datos de CEPAL, CONEVAL. Varios años.  
 2. ONU: <https://www.undp.org/sites/g/files/zskgke326/files/migration/mx/UNDP-MX-PovRed-IDHmunicipalMexico-032014.pdf>  
<https://www.idhmunicipalmexico.org>  
[https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME\\_PNUD\\_2022\\_electronico-Portadas.pdf](https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME_PNUD_2022_electronico-Portadas.pdf)  
 3. CONAPO: [https://paot.org.mx/centro/linea-semamat/informe02/estadisticas\\_2000/compendio\\_2000/01dim\\_social/01\\_05\\_Pobreza/dat\\_a\\_pobreza/Cuadrol.5.2.htm](https://paot.org.mx/centro/linea-semamat/informe02/estadisticas_2000/compendio_2000/01dim_social/01_05_Pobreza/dat_a_pobreza/Cuadrol.5.2.htm)  
 4. ONU: [https://apps1.semarnat.gob.mx:8443/dgeia/compendio\\_2016/dgeiawf.semarnat.gob.mx\\_8080/ibi\\_apps/WFServlet68ca.html](https://apps1.semarnat.gob.mx:8443/dgeia/compendio_2016/dgeiawf.semarnat.gob.mx_8080/ibi_apps/WFServlet68ca.html)  
[https://apps1.semarnat.gob.mx:8443/dgeia/informe\\_2008/compendio\\_2008/compendio2008/100.8.236\\_8080/ibi\\_apps/WFServlet7a2f.html](https://apps1.semarnat.gob.mx:8443/dgeia/informe_2008/compendio_2008/compendio2008/100.8.236_8080/ibi_apps/WFServlet7a2f.html)

We can observe that all regions encompassed in the Macrosouth maintain lagging economic levels, resulting from low per capita incomes, educational levels, poverty, and poor healthcare levels. This

translates into low life expectancies for their populations, which, according to UN standards, constitutes "lagging" regional economies throughout the analysis period.

## Human Development Index(HDI). Macronorth (1980-2020)

Following the same methodology applied to

analyze the behavior of the Macrosouth we review the case of the Macronorth through the figures reported in the following table for our analysis period:

| TABLA 2.3 MACRO-NORTE Índice de Desarrollo Humano (IDH) Armonizado por Regiones (1980-2020)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |      |      |                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|-----------------|
| Región                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1980 | 1990 | 2000 | 2010 | 2020 | TMAC(1980-2020) |
| Norte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.73 | 0.78 | 0.81 | 0.74 | 0.77 | 0.10%           |
| Noroeste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.76 | 0.82 | 0.81 | 0.76 | 0.8  | 0.10%           |
| Occidente                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.7  | 0.73 | 0.78 | 0.73 | 0.78 | 0.30%           |
| Centro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.7  | 0.81 | 0.8  | 0.75 | 0.77 | 0.20%           |
| Promedio Regional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.72 | 0.79 | 0.8  | 0.75 | 0.78 | 0.20%           |
| <b>FUENTES:</b><br>1. Elaboración propia a partir de datos de CEPAL, CONEVAL. Varios años.<br>2. ONU: <a href="https://www.undp.org/sites/g/files/zskgke326/files/migration/mx/UNDP-MX-PovRed-IDHmunicipalMexico-032014.pdf">https://www.undp.org/sites/g/files/zskgke326/files/migration/mx/UNDP-MX-PovRed-IDHmunicipalMexico-032014.pdf</a><br><a href="https://www.idhmunicipalmexico.org">https://www.idhmunicipalmexico.org</a><br><a href="https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME_PNUD_2022_electronico-Portadas.pdf">https://www.undp.org/sites/g/files/zskgke326/files/2023-02/INFORME_PNUD_2022_electronico-Portadas.pdf</a><br>3. CONAPO: <a href="https://paot.org.mx/centro/line-semarnat/informe02/estadisticas_2000/compendio_2000/01dim_social/01_05_Pobreza/dato_pobreza/Cuadro1.5.2.htm">https://paot.org.mx/centro/line-semarnat/informe02/estadisticas_2000/compendio_2000/01dim_social/01_05_Pobreza/dato_pobreza/Cuadro1.5.2.htm</a><br>4. ONU: <a href="https://apps1.semarnat.gob.mx:8443/dgeia/compendio_2016/dgeiawf.semarnat.gob.mx_8080/ibl_apps/WFServlet68ca.html">https://apps1.semarnat.gob.mx:8443/dgeia/compendio_2016/dgeiawf.semarnat.gob.mx_8080/ibl_apps/WFServlet68ca.html</a><br><a href="https://apps1.semarnat.gob.mx:8443/dgeia/informe_2008/compendio_2008/compendio2008/10.100.8.236_8080/ibl_apps/WFServlet7a2f.html">https://apps1.semarnat.gob.mx:8443/dgeia/informe_2008/compendio_2008/compendio2008/10.100.8.236_8080/ibl_apps/WFServlet7a2f.html</a> |      |      |      |      |      |                 |

It is worth noting from the previous table that all the regions encompassed in the Macronorth keep the levels of “lagging economies” according to UN standards, albeit having higher per capita incomes than the Macrosouth.

In other words, higher growth is not enough to guarantee better living standards of a region or country when a poor distribution of wealth within their regional populations persists. Given that, as we mentioned earlier, the HDI weighs, in addition to per capita income, crucial social factors such as educational level and healthcare levels. This implies low life expectancies, which altogether converged into a lagged region status under UN international criteria, throughout the entire period, especially by the end of the period, just as in the case of the Macrosouth region previously analyzed. With the sole exception of the Northeast region, which shows a figure with a slight HDI improvement during the period.

### Social Outlook's Preliminary Conclusions:

From the above analysis of the social indicators, it is evident that the Macronorth region has largely benefited from both federal investment and private and foreign direct investments into this region through time, which explains the high job generation in the region, but this does not entail a better income distribution among its population. Although Macronorth is the largest job generator and also shows the largest concentration of inhabitants, it reports alarming levels of income maldistribution during the analysis period. That is,

the economic boom is not reflected in higher living standards for the regional population and their families during the period under analysis.

On the other hand, the observed lag in the Macrosouth region compared to the Macronorth region, in terms of lower GDP and per capita, as well as formal employment, lower human concentration, can be primarily explained by the low concentration of capital, both from federal and foreign investment, in this region during the analysis period. This can be translated as the existence of unbalanced development within the two regions, characterized by greater inequality and a lower Human Development Index (HDI) between these two macroregions. Evident from the reported figures of HDI in both macroregions and the Gini coefficient, showing a very poor income distribution in both of them, both within the “wealthy” Macronorth and in the lagging or “poor” Macrosouth through time.

### Environmental Outlook

The environmental indicators considered in this section are Population Density, Vehicle Motorization, Energy Consumption, and Greenhouse Gases (CO<sub>2</sub>).

### Population Density. Macrosouth vs. Macroregion (1980-2020)

In this section we start examining the prevailing situation with respect to population density in both macroregions during our study horizon 1980-2020.

## Population Density. Macrosouth (1980–2020)

We start by reviewing the population density in Macrosouth during the study horizon based on the figures reported in the following table.

| TABLA 3.2 MACRO-SUR Densidad Poblacional por Regiones (1980-2020)<br>(hab/km2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |              |              |              |            |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------|--------------|------------|------------------|
| Región                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1980        | 1990         | 2000         | 2010         | 2020       | TMAC (1980-2020) |
| Golfo de México                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 47.4        | 56.5         | 65.4         | 74.4         | 84.3       | 1.50%            |
| Pacífico Sur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 28.6        | 38.5         | 45.5         | 52.2         | 58.7       | 1.80%            |
| Sureste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 12.2        | 17.1         | 23           | 29.3         | 39         | 2.90%            |
| <b>Total Regional</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>88.2</b> | <b>112.1</b> | <b>133.9</b> | <b>155.9</b> | <b>182</b> | <b>2.10%</b>     |
| <b>FUENTES:</b><br>1. Elaboración propia a partir de datos de INEGI. Varios años.<br>2. INEGI:<br><b>FUENTES:</b><br><a href="https://en.www.inegi.org.mx/app/tabulados/interactivos/?pq=Poblacion_Poblacion_07_fb7d5132-39f0-4a6c-b6f6-4cbe440e048d">https://en.www.inegi.org.mx/app/tabulados/interactivos/?pq=Poblacion_Poblacion_07_fb7d5132-39f0-4a6c-b6f6-4cbe440e048d</a> <a href="https://sinaloaennumeros.codesin.mx/wp-content/uploads/2015/11/Densidad-de-poblaci%C3%B3n-por-entidad-federativa.xls">https://sinaloaennumeros.codesin.mx/wp-content/uploads/2015/11/Densidad-de-poblaci%C3%B3n-por-entidad-federativa.xls</a> .<br><a href="https://cuentame.inegi.org.mx/poblacion/densidad.aspx?tema=P#:~:text=De%20acuerdo%20con%20el%20Censo,64%20habitantes%20por%20kil%C3%B3metro%20cuadrado.">https://cuentame.inegi.org.mx/poblacion/densidad.aspx?tema=P#:~:text=De%20acuerdo%20con%20el%20Censo,64%20habitantes%20por%20kil%C3%B3metro%20cuadrado.</a> |             |              |              |              |            |                  |

From the outset, it is noteworthy that all regions comprising the Macrosouth keep relatively low population density levels compared to the Macronorth, as we shall see below, due to the latter's territorial extension and low population density. This is especially true for the Gulf region (84.3 inhabitants per km<sup>2</sup>), followed in second place by the South-Pacific region (58.7 inhabitants per km<sup>2</sup>), and third and last place by the Southeast region (39.0 inhabitants per km<sup>2</sup>). However, it should be noted that the latter region has been growing at a pace of almost 3% (2.9%). This suggests a trend of increasing human concentration in the Gulf and Mayan regions in the coming years. This is largely explained by the federal megainvestments channeled toward the oil

industry and tourist industry during the last decade 2010–2020 toward the oil industry, located in Tabasco and Campeche in the Gulf region and the tourist industry around the Mayan zone (Southeast), not to mention the likely impact of mega investments focused to the Mayan Trailway and the Transoceanic Corridor in the Gulf and South-Pacific regions.

## Population Density. Macronorth.(1980–2020)

Concerning the prevailing situation in the Macronorth, we used the data from the figures reported in the following table for our analysis period.

| TABLA 3.3 MACRO-NORTE Densidad Poblacional por Regiones (1980-2020)<br>(hab/km2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |              |              |              |               |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|---------------|------------------|
| Región                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1980         | 1990         | 2000         | 2010         | 2020          | TMAC (1980-2020) |
| Norte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 14.5         | 17.7         | 20.9         | 24.3         | 40.5          | 2.60%            |
| Noroeste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 12.5         | 15.7         | 20.1         | 24.1         | 66.1          | 4.30%            |
| Occidente                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48.6         | 59.1         | 68.9         | 78.6         | 90.3          | 1.60%            |
| Centro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 203.9        | 238.6        | 306.1        | 328.3        | 1053.4        | 4.20%            |
| <b>Total Regional</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>279.5</b> | <b>331.1</b> | <b>415.9</b> | <b>455.4</b> | <b>1250.2</b> | <b>3.20%</b>     |
| <b>FUENTES:</b><br>1. Elaboración propia a partir de datos de INEGI. Varios años.<br>2. INEGI:<br><b>FUENTES:</b><br><a href="https://en.www.inegi.org.mx/app/tabulados/interactivos/?pq=Poblacion_Poblacion_07_fb7d5132-39f0-4a6c-b6f6-4cbe440e048d">https://en.www.inegi.org.mx/app/tabulados/interactivos/?pq=Poblacion_Poblacion_07_fb7d5132-39f0-4a6c-b6f6-4cbe440e048d</a> <a href="https://sinaloaennumeros.codesin.mx/wp-content/uploads/2015/11/Densidad-de-poblaci%C3%B3n-por-entidad-federativa.xls">https://sinaloaennumeros.codesin.mx/wp-content/uploads/2015/11/Densidad-de-poblaci%C3%B3n-por-entidad-federativa.xls</a> .<br><a href="https://cuentame.inegi.org.mx/poblacion/densidad.aspx?tema=P#:~:text=De%20acuerdo%20con%20el%20Censo,64%20habitantes%20por%20kil%C3%B3metro%20cuadrado.">https://cuentame.inegi.org.mx/poblacion/densidad.aspx?tema=P#:~:text=De%20acuerdo%20con%20el%20Censo,64%20habitantes%20por%20kil%C3%B3metro%20cuadrado.</a> |              |              |              |              |               |                  |

It turns out that for the Macronorth, population density is lower in almost all of its regions, except

for the Central region (1,053 inhabitants per km<sup>2</sup>), growing at a pace of 4.2% during the analysis

period. A phenomenon that implies a large number of people living in a small territorial space, as is the case in the metropolitan area of Mexico City(CDMX) and the State of Mexico, as well as other neighboring states. In second place is the Western region (90.3 inhabitants per km<sup>2</sup>), growing at a rate of 1.6%, and in third place is the Northwest region (66.1), growing at a pace of 4.3%. In fourth and last place is the Northern region (40.5), at a pace of 2.6%. These are regions with a large territory relative to their population size.

Although the Macrosouth region shows higher levels of population density in almost all of its regions, these are small territorial spaces compared to the small population that inhabits them. This is reflected in higher population concentrations, particularly in the Central region (Macronorth), which accounts for more than half of the country's population within that region and nationally during the period.

The above scenario reveals a regional imbalance in terms of population density, as it leads to a disruption of urban services and unbalanced growth in the regions encompassed in the Macronorth, especially around the Central and Western regions. Which growth rates are worrying

during the period, reaching average annual growth rates of 4.2% and 4.3%, respectively, during the study period. This foreshadows urban problems due to human and industrial overcrowding within this macroregion and its entities encompassed within it in the coming years.

#### Motorization. Macrosouth vs. Macronorth (1980-2020).

An indicator considered synonymous with the level of "progress" for the population of a region, entity, or municipality, as well as its urbanization, is its level of vehicle motorization, expressed in thousands of vehicles per 1,000 inhabitants, by municipality, entity, or region.

#### Motorization. Macrosouth (1980-2020).

With the aim at analyzing the motorization situation in Macrosouth, we use the figures reported in the following table, which shows this information for this indicator for our time horizon period of analysis.

| TABLA 3.1 MACRO-SUR Motorización por Regiones (1980-2020)<br>(Vehículos por cada 1000 habitantes)                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |       |       |       |       |                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-----------------|
| Región                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1980  | 1990  | 2000  | 2010  | 2020  | TMAC(1980-2020) |
| Golfo de México                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 60.7  | 97.7  | 132.8 | 220   | 291.1 | 4.00%           |
| Pacífico Sur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 28    | 41.4  | 72.2  | 141.5 | 232.9 | 5.40%           |
| Sureste                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 67.1  | 110.5 | 133.5 | 282.9 | 415.9 | 4.70%           |
| Total general                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 155.8 | 249.5 | 338.5 | 644.3 | 940   | 4.60%           |
| FUENTES:<br>1. Elaboración propia a partir de datos de INEGI. Varios años.<br>2. INEGI:<br><a href="https://www.inegi.org.mx/sistemas/olap/consulta/general_ver4/MDXQueryDatos.asp?proy=vmrc_vehiculos">https://www.inegi.org.mx/sistemas/olap/consulta/general_ver4/MDXQueryDatos.asp?proy=vmrc_vehiculos</a><br><a href="https://www.inegi.org.mx/programas/vehiculosmotor/#tabulados">https://www.inegi.org.mx/programas/vehiculosmotor/#tabulados</a><br><a href="https://www.inegi.org.mx/temas/vehiculos/">https://www.inegi.org.mx/temas/vehiculos/</a> |       |       |       |       |       |                 |

From the information of the above table it is worth noting that Macrosouth shows low levels of motorization, explained by their low per capita levels, except for the Southeast, with the higher motorization level close to 416 (415.9 vehicles per 1,000 inhabitants) for 2020, growing at a pace of 4.7%. This is followed in second place by the Gulf region (291.1 vehicles per 1,000 inhabitants), and in third place, the South-Pacific region (almost 233 vehicles per 1,000 inhabitants). Motorization of all Macrosouth's regions is growing at a combined rate of 4.6% annually during the analysis period. Which turns out to be a very dynamic growth, higher than

the prevailing rates in Macronorth's regions, as we shall see below.

#### Motorization. Macronorth (1980-2020).

To visualize the prevailing situation in the Macronorth concerning vehicle motorization, we use the data reported in the table below, which reports the figures for this indicator for each region involved in this macroregion for the study period.

| TABLA 3.1 MACRO-NORTE Motorización por Regiones (1980-2020)<br>(Vehículos por cada 1000 habitantes) |       |       |       |        |        |                 |
|-----------------------------------------------------------------------------------------------------|-------|-------|-------|--------|--------|-----------------|
| Región                                                                                              | 1980  | 1990  | 2000  | 2010   | 2020   | TMAC(1980-2020) |
| Norte                                                                                               | 88    | 148.5 | 200.8 | 343    | 408.9  | 3.90%           |
| Noroeste                                                                                            | 142.4 | 194.4 | 240.1 | 345.1  | 493.4  | 3.20%           |
| Occidente                                                                                           | 67.7  | 112.5 | 185.3 | 367.6  | 492    | 5.10%           |
| Centro                                                                                              | 104.9 | 130.6 | 154.7 | 273.8  | 440.4  | 3.70%           |
| Total Regional                                                                                      | 403   | 586   | 780.9 | 1329.4 | 1834.6 | 3.90%           |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI. Varios años.  
 2. INEGI:  
[https://www.inegi.org.mx/sistemas/olap/consulta/general\\_ver4/MDXQueryDatos.asp?proy=vmrc\\_vehiculos](https://www.inegi.org.mx/sistemas/olap/consulta/general_ver4/MDXQueryDatos.asp?proy=vmrc_vehiculos)  
<https://www.inegi.org.mx/programas/vehiculosmotor/#tabulados>  
<https://www.inegi.org.mx/temas/vehiculos/>

Where we can observe that all regions of the Macronorth shows higher levels of motorization than the Macrosouth, explainable by a higher per capita level in this macroregion, highlighting in first place the Northwest region with almost 493 (493.4 vehicles per 1,000 inhabitants), followed very closely, in second place, by the West region with 492 (492.0 vehicles per 1,000 inhabitants), third place the Center region with about 440 (440.4 vehicles per 1,000 inhabitants) and in fourth and last place the North region with almost 409 (408.9 vehicles per 1,000) with rates above the 3% annual average, although the western region is growing above the 5% (5.1%) annual average during the period. This results in particularly dynamic rates.

### Energy Consumption, Macrosouth vs Macronorth (1980–2020)

A key indicator associated with the degree of industrialization in a region is its electricity consumption, a variable that is in turn associated with greenhouse effect levels in that region, an indicator we will examine later.

### Energy Consumption. Macrosouth. (1980–2020)

To explore the electricity consumption (thousands of gigawatt-hours) in the Macrosouth region during the analysis period, based on the data reported in the following table.

| TABLA 3.3 MACRO-SUR Consumo Energía Eléctrica por Regiones (1980-2020) (Miles GigaWatts) |        |        |        |        |        |                  |
|------------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|------------------|
| Región                                                                                   | 1980   | 1990   | 2000   | 2010   | 2020   | TMAC (1980-2020) |
| Golfo de México                                                                          | 1779.9 | 2251.3 | 2515.3 | 2995.3 | 3348.8 | 13.50%           |
| Pacífico Sur                                                                             | 5928.1 | 6473.9 | 7060.6 | 7949.4 | 8428.5 | 7.30%            |
| Sureste                                                                                  | 1508.4 | 1965.3 | 2520.9 | 3281.3 | 3954.3 | 21.30%           |
| Total Regional                                                                           | 9216.4 | 10691  | 12097  | 14226  | 15732  | 14.00%           |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI, SIE, SENER. Varios años.  
 2. INEGI:  
<https://www.inegi.org.mx/rnm/index.php/catalog/495>  
 3. Sistema de Información Energética:  
[https://sie.energia.gob.mx/bdiController.do?action=cuadro&cvecu=DIIIE\\_C32\\_ESP](https://sie.energia.gob.mx/bdiController.do?action=cuadro&cvecu=DIIIE_C32_ESP)  
 4. SENER:  
[https://www.gob.mx/cms/uploads/attachment/file/707654/BALANCE\\_NACIONAL\\_ENERGIA\\_0403.pdf](https://www.gob.mx/cms/uploads/attachment/file/707654/BALANCE_NACIONAL_ENERGIA_0403.pdf)

From the previous information, it is worth noting that the largest electricity-consuming region in the Macrosur region is the South- Pacific region, with a consumption of 8,428 thousand Gigawatts (8,48.5 thousand Gigawatts, growing at an average annual rate of 7.3%), followed by the Southeast region, with a consumption of 3,954 thousand Gigawatts (3,954.3, at a dizzying annual average of 21.3%). Finally, the Gulf region, with a consumption

of nearly 3,349 thousand Gigawatts (33,348) growing at an average annual rate of 13.5% during the period).

As a whole, the entire Macrosouth consumed a total of 15,732 thousand gigawatts by the end of the period, growing at a very dynamic rate of 14.0% average annual growth during the study period. This is indicative of a macroregion undergoing rapid

industrialization. This is explained by the substantial public and foreign investments channeled primarily toward this macroregion, particularly toward the South Pacific and Gulf regions (oil industry, the Tabasco-Minatitlán-Coatzacoalcos corridor) and the Southeast (tourism industry of the Mayan Riviera). This trend is expected to be spurred by

new megainvestments in the Trans-Isthmus Corridor and the Southeast in the coming years.

### Energy Consumption. Macronorth (1980–2020)

To examine the energy consumption panorama prevailing in the Macronorth, we take advantage of the figures reported in the following table for the regions encompassed in this macroregion:

| TABLA 3.4 MACRO-NORTE Consumo Energía Eléctrica por Regiones (1980-2020) (Miles GigaWatts) |              |              |              |              |              |                  |
|--------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|------------------|
| Región                                                                                     | 1980         | 1990         | 2000         | 2010         | 2020         | TMAC (1980-2020) |
| Norte                                                                                      | 5006.1       | 5820.7       | 6359.8       | 7472.6       | 8482.7       | 11.10%           |
| Noroeste                                                                                   | 6317.5       | 6632.5       | 7143.6       | 8285         | 9137.5       | 7.70%            |
| Occidente                                                                                  | 4456.1       | 4858.5       | 5236.5       | 5899.3       | 6587.6       | 8.10%            |
| Centro                                                                                     | 5615.9       | 5986.9       | 6687.8       | 7946.7       | 8835         | 9.50%            |
| <b>Total Regional</b>                                                                      | <b>21396</b> | <b>23299</b> | <b>25428</b> | <b>29604</b> | <b>33043</b> | <b>9.10%</b>     |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI, SIE, SENER. Varios años.  
 2. INEGI: <https://www.inegi.org.mx/rnm/index.php/catalog/495>  
 3. Sistema de Información Energética: [https://sie.energia.gob.mx/bdiController.do?action=cuadro&cvequa=DII\\_C3\\_2\\_ESP](https://sie.energia.gob.mx/bdiController.do?action=cuadro&cvequa=DII_C3_2_ESP)  
 4. SENER: [https://www.gob.mx/cms/uploads/attachment/file/707654/BALANCE\\_NACIONAL\\_ENERGIA\\_0403.pdf](https://www.gob.mx/cms/uploads/attachment/file/707654/BALANCE_NACIONAL_ENERGIA_0403.pdf)

From the behavior of energy consumption in the four regions encompassed in the entire Macronorth, we can understand Mexico's emphasis on promoting industrialization in this macroregion. This is reflected in the high levels of energy consumption in its four regions. The Northwest region stands out in first place (9,137.5 thousand Gigawatts, growing at an average annual rate of 7.7%), followed in the second place by the Center region (8,835.0 thousand Gigawatts, at an annual rate of 9.5%), the Northern (8,482.7 thousand Gigawatts, at an impressive annual rate of 11.1%), and the West (6,587.6 thousand Gigawatts, at an annual rate of 8.1%).

Therefore, the aggregate consumption of the entire Macronorth more than doubled that of the entire Macrosouth, since it grew at an average

annual rate of 9.1% during the period. This confirms our hypothesis that the increased flow of capital to this macroregion during this period, both domestic and foreign, has exacerbated its industrialization and, consequently, its energy consumption during the period under analysis.

### CO2 Gas Production. Macrosouth (1980–2020)

Given the fact that electricity consumption in both regions primarily comes from fossil fuels, this implies a higher per capita concentration of greenhouse gas emissions (CO2) in one region than in another. For this analysis, we reproduce the table below, which shows the total CO2 emissions per capita in the Microsouth by region during the analysis period

| TABLA 3.4 MACRO-SUR Emisiones Totales de Gases Efecto Invernadero (1980-2020) (Millones Ton. /Per cápita) |            |            |            |             |             |                  |
|-----------------------------------------------------------------------------------------------------------|------------|------------|------------|-------------|-------------|------------------|
| Región                                                                                                    | 1980       | 1990       | 2000       | 2010        | 2020        | TMAC (1980-2020) |
| Golfo de México                                                                                           | 1.1        | 2.1        | 4          | 7.1         | 13.4        | 6.40%            |
| Pacífico Sur                                                                                              | 0.1        | 0.1        | 0.2        | 0.5         | 11.7        | 14.10%           |
| Sureste                                                                                                   | 1.7        | 2.4        | 3.4        | 4.7         | 6.6         | 3.50%            |
| <b>Total Regional</b>                                                                                     | <b>2.9</b> | <b>4.7</b> | <b>7.7</b> | <b>12.2</b> | <b>31.7</b> | <b>8.00%</b>     |

**FUENTES:**  
 1. Elaboración propia a partir de datos de INEGI. Varios años.  
 2. INEGI: <https://www.inegi.org.mx/temas/vivienda/>  
 3. Banco Mundial: <https://datos.bancomundial.org/indicador/EN.ATM.CO2E.KT?locations=M>  
 4. BBVA: <https://www.bbva.com/wp-content/uploads/2024/01/2024-Emisiones-y-fuentes-GEI-Mexico.pdf>  
<https://www.bbva.com/wp-content/uploads/2024/01/2024-Emisiones-y-fuentes-GEI-Mexico.pdf>

Where we find out that the per capita production of CO<sub>2</sub> by regions, from highest to lowest, is in the first place the Gulf region (13.4) million tons p.c. growing at an average annual rate of 6.4%, followed in second place by the South-Pacific (11.7) million tons p.c., with an average yearly rate of 14.1%, and in third and last place, the Southeast region (6.6) million tons p.c., with an average annual rate of 3.5%. Altogether, the entire Macrosur region generates a combined total of 31.7 million tons per capita, with an average annual rate of 8.0% for the period.

### CO<sub>2</sub> Gas Production. Macronorth (1980–2020)

To examine the greenhouse gas (CO<sub>2</sub>) production situation in the Macronorth region, we used the figures reported in the following table, which reports information for the four regions comprising this macroregion during the period under analysis

| TABLA 3.5 MACRO-NORTE Emisiones Totales de Gases Efecto Invernadero (1980-2020) (Millones Ton. /Per cápita) |             |             |           |             |             |                  |
|-------------------------------------------------------------------------------------------------------------|-------------|-------------|-----------|-------------|-------------|------------------|
| Región                                                                                                      | 1980        | 1990        | 2000      | 2010        | 2020        | TMAC (1980-2020) |
| Norte                                                                                                       | 3.8         | 5.6         | 8.1       | 11.3        | 16.4        | 3.70%            |
| Noroeste                                                                                                    | 0.6         | 1.5         | 3.7       | 8.1         | 19.6        | 8.90%            |
| Occidente                                                                                                   | 0.8         | 2.3         | 6.4       | 16          | 43.9        | 10.40%           |
| Centro                                                                                                      | 6.4         | 7.9         | 9.9       | 12          | 15          | 2.20%            |
| <b>Total Regional</b>                                                                                       | <b>11.7</b> | <b>17.3</b> | <b>28</b> | <b>47.4</b> | <b>94.9</b> | <b>6.30%</b>     |

1. Elaboración propia a partir de datos de INEGI. Varios años.  
 2. INEGI: <https://www.inegi.org.mx/temas/vivienda/>  
 3. Banco Mundial: <https://datos.bancomundial.org/indicador/EN.ATM.CO2E.KT?locations=MX>  
 4. BBVA: <https://www.bbva.com/wp-content/uploads/2024/01/2024-Emisiones-y-fuentes-GEI-Mexico.pdf> <https://www.bbva.com/wp-content/uploads/2024/01/2024-Emisiones-y-fuentes-GEI-Mexico.pdf#:~:text=URL%3A%20https%3A%2F%2Fwww.bbva.com%2Fwp>

From the previous information, it is clear that CO<sub>2</sub> gas production level in the Macronorth shows higher CO<sub>2</sub> levels during the period compared to its Macrosouth counterpart. Consumption by region in this macroregion, in terms of importance (in millions of tons per capita), by the end of the period (2020), comes firstly the Western Region (43.9 million tons per capita) (growing at pace of 10.4%); secondly, comes the Northwest Region (19.6 million tons per capita) (with an average annual rate of 8.9%); thirdly comes the Northern Region (16.4 million tons per capita) (with an average annual rate of 10.4%); and finally the Central Region (15.0 million tons per capita) (with an average annual rate of 6.3%).

Altogether, this entire macroregion produces 94.9 million tons of CO<sub>2</sub> per capita, growing at an average rate of 6.30% during the analysis period. This volume is almost triple the volume of CO<sub>2</sub> produced by the entire Macrosouth region.

Accordingly, the high production of CO<sub>2</sub> is closely associated with the high levels of industrialization in the Macronorth, but which also inflicts other unwanted effects beyond the environmental ones such as various externalities related to health, human and industrial

overcrowding in the regions, entities, and municipalities included in this macroregion.

### Environmental Outlook's Preliminary Conclusions:

The environmental implications observed in both macroregions are intimately associated with several factors, including, firstly and foremost, the degree of industrialization prevailing in each region over time. However, this is in turn directly a function of the emphasis on capital flows channeled by the Mexican state to each macroregion.

Situation, which is also reflected in the higher or lower per capita levels in each macroregion studied. In the Macronorth, for example, a higher level of motorization as opposed to the Macrosouth, as a consequence of people's higher purchasing power in the first macroregion. Likewise, energy consumption in Macronorth is closely linked to its level of industrialization, which in turn impacts the level of production of greenhouse gas (CO<sub>2</sub>) in both macroregions.

Therefore, the concentration of greenhouse gases in the Macronorth results explainable by the high industrial concentration and human overcrowding in this macroregion. Which also obeys

as well to the industrialization policies' focus to foster growth in this macroregion to the detriment of the Macrosouth. Policies which have remained behind and unchanged by previous governments throughout almost the entire period of analysis, with socioeconomic implications such as economic inequality and low living standard (HDI) observed in both macroregions, which become more apparent in the Macrosouth.

### III. PART II. TOWARDS THE RESCUING OF MACROSOUTH

#### Background

Based on the regional asymmetry analyzed and depicted in the first part of this article between Macronorth and Macrosouth, it becomes clear and explainable why Mexico's decision to embark on the rescuing of the latter through large federal investments aimed at promoting growth and social well-being in the latter under a completely new strategy is already mentioned. Most of these findings come from a recent analysis carried out by the author, Vid, Luis-Pineda, O. (Dec 10, 2023).

Under the basic premise of furnishing a brief overview of the iconic megaprojects implemented by previous regime, AMLO administration (2019-2024), the Maya Train and the Tehuantepec Transoceanic Corridor, we briefly highlight herein some of the author's findings on their implications, taking as a reference departure an investigation led by the author entitled "The Trans-Isthmus Megaproject and the Maya Train in Mexico: Some Implications at the State and Municipal Level," vid, Luis-Pineda, O. (2021), and complemented by other more recent publications of the author, vid, Luis-Pineda, O.(Jul 23, 2023), Luis-Pineda, O.(Oct 14, 2024.a), Luis-Pineda, O..(Oct 14, 2024.b), Luis-Pineda, O.(Dec 10, 2023).

From which we extract some pertinent information and elements of judgment on the relevance of both megaprojects, which are closely linked, both logistically and geographically, lying in the same Macrosouth region, which represents the main object of our particular attention in this section. Likewise, the importance of capital flows toward these megaprojects in stimulating growth and well-being in such macroregion and, paralleling diminishing the existing socioeconomic asymmetry between the two macroregions through a sustainable and socially inclusive approach within the framework of the current economic strategy

advocated by the past and present regimes, vid, PND(2025-2030).

On this regard is important to underline herein that asymmetry observed between the two macroregions, is neither circumstantial nor fortuitous, but nurtured on policies implemented by the past Mexican regimes during the neoliberal period, which make possible among other measures, the massive and unrestricted entry of foreign capital into Mexican territory, particularly along its Mexican-US border's federal states and major Mexican municipalities. This explains the emergence of the export-oriented maquiladora industry. The illusion that Mexico would create a "containment curtain" along its border to stem the flow of migration into the U.S. Through a program called BIP (Border Industrialization Program), which had been in effect since World War II, which initially led to the United States unilaterally canceling the Bracero Program, which had been in effect since World War II. As a counterpart, the US government persuades Mexico to accept the implementation of these maquiladora plants on its northern border as an alleviation valve for the cancellation of the Braceros program, affecting thousands of laborers stranded overnight at the US border expecting to enter into the US through this Program. The Bracero Program and other measures were implemented during Díaz Ordaz's administration, one of the worst presidents of México, vid, Luis-Pineda, O. (1998).

Lured by the expectation that the assembly industry would generate foreign currency, formal jobs and technological transference for Mexico through its operation (under the so-called off-shore production or offshoring productive scheme), aiming to absorbing the lagging labor of thousands of Mexican braceros who had been stranded on Mexico's northern border in search of employment in the United States as part of the Bracero Program canceled by the US government, as previously mentioned. Although the maquiladora industry effectively generates growth in the border states through formal jobs, albeit low-paying, and foreign currency for the country. Albeit associated with the economic boom in the northern states, it also generated significant social and environmental costs and myriad externalities upon them, vid, Luis-Pineda, O. (1998bis).

Under this framework, the Mexican government in those years intervened but favoring foreign investors to "freeze" or undervalue labor prices throughout the country, making it "more

attractive" to foreign investors in general and maquiladoras in particular. This had social implications for the rest of the national workforce in its various economic sectors, thus contributing to the impoverishment of the Mexican workforce compared to its foreign counterparts. This opportunity was naturally seized by investors, mostly with American capital, to increase their profits and the competitiveness of American products in the world market, which had sharply declined during the postwar period.

In addition to artificially cheapening the Mexican labor force as a public policy, the Mexican state also intervenes to grant additional concessions to this largely North American-owned industry as an "ad hoc" regulatory framework to allow it to pay taxes only on the Mexican inputs (5%) used in its processes and then re-export its finished (assembled) products to the US. Along with lax environmental legislation, this promotes environmental degradation on the northern border municipalities through its productive processes, along with concomitant labor overexploitation due to low wages and long working hours, etc. Upon the acquiescence of corrupt local authorities and a docile state completely permeated by corruption, vid, Luis-Pineda, O. (2000).

In short, with all this support granted from Mexico, the flourishing of this industry in the northern border zone is understandable, giving rise to a disintegrated industry from the rest of the Mexican productive apparatus and failing to achieve a technology transfer to Mexico. Operating de facto as a truly "industrial enclave" in northern Mexico, among other externalities. Although undeniably generated large flows of foreign currency and permanent jobs for Mexico over the years, it has also produced urban imbalances with high social and environmental costs and other externalities over major border municipalities where it has established itself, vid, Luis-Pineda, O. (1998bis).

The historical lesson for Mexico behind this important industry result more than evident for the nation in particular for the current nationalistic government, in the sense that without the strong economic intervention of a democratic State capable of implementing public policies to achieve a balance between growth and well-being a region and striving for a sustainable environment in it, an unbalanced and unsustainable regional development along with a socially exclusive nature

as that generated in the northern border as well as in other regions within Mexico where this industry has established to the date in search of cheap labor vis-a-vis the shortage of cheap labor on the Mexico and thus promoting an "exodus" of maquiladoras to the interior of the country in search of abundant cheap labor force and thereby mimicking the imbalances and externalities produced on northern Mexico, Vid, Luis-Pineda, O. (2006).

Accordingly, these kind of public policies implemented by Mexico in the past in northern region for many years, undoubtedly contributed to exacerbate the existing asymmetry between North-South, and worsen the type of "dual economy" which has characterized Mexico's development since the beginning of the country industrialization which generated an unequal economy or "Two Mexicos" in the nation, one in the north, with better living standards and use of modern productive technology (Macronorth) versus another lagging south, with low wages and using obsolete or traditional technology (Macrosouth) as we have already analyzed in the first part of this document, Vid, Gollás, Manuel (1982).

### **MACROSOUTH: The Mayan Trailway, Mexican Transoceanic Corridor, and Other Concurrent Megaprojects in the Macrosouth Region**

Given the industrial concentration and unbalanced development on the northern border (Macronorth) due to the aforementioned unrestricted foreign investments and the neoliberal strategy adopted by Mexico during this period, vis-a-vis imperative for Mexico, on the one hand, to reduce the asymmetry between both macroregions, and on the other, a distancing from the neoliberal approach adopted by previous governments and most of the Latin American countries (Washington Consensus), vid, Martinez, R. Rubi et al. (2016). This explains the current government's nationalist emphasis on adopting an unprecedented, socially inclusive economic strategy focused on simultaneously stimulating growth and social well-being, as highlighted in the National Development Plan, past and present, vid, PND (2025-2030). And Mexico's departure from hegemonic policies such as the Washington Consensus proposed by the IMF has led to significant social and economic costs for many economies within the Latin American region, including Mexico, in particular which has specifically applied these kind "anti-development policies"

during the past neoliberal regimes, as Arturo Guillén points out, *vid*, Guillén, Arturo (2012).

Under this context, it is clear that the emphasis granted by the current nationalistic Mexican government to channeling significant public investments in productive infrastructure throughout the country. With particular emphasis on long-standing lagging regions such as the Macrosouth region, with a focus on the oil industry, such as the Dos Bocas Refinery in Tabasco (to achieve energy self-sufficiency and reduce dependence on foreign energy), *vid*, García Karol (Sep 9, 2019). And also promoting two iconic mega-projects as the Mayan Trailway and the Trans-Isthmus Corridor, already inaugurated by the previous administration and currently put operation, as we already mentioned above. These large capital public funds come along an inclusive regional development strategy under the concept of "Well-being Poles" implemented for the Maya Train (based on the tourism industry) applied in the Maya-Gulf of Mexico geographic corridor and, on the other hand, around the Trans-Isthmus Corridor, which runs along the trans-isthmus belt, which logistically connects the South-Pacific and Gulf of Mexico regions (based on trade and industrialization), *vid*, PODEBIS.Gob.Mexico (2023).

### **Macrosur: Towards an Inclusive and Sustainable Development as an Economic Strategy in this Macroregion**

However, speaking of social inclusion in the context of a country or region under the current global environment in which we are immersed in Mexico necessarily refers us to the concept of a balanced versus unbalanced economy, *vid*, Luis-Pineda, O. (2021a). Although given the complexity of the concepts involved and the brevity of this space, we will attempt to only outline some of the author's findings stemming from the aforementioned research.

To achieve a balanced economy, there should be a balance between the binomial economic growth and social well-being, *vis-à-vis* a sustainable environment in an economy. However, to achieve this balance, the economic leadership of the State results unavoidably as the legal guarantor *par excellence* to assess the equilibrium between three fundamental elements: economic growth, social well-being, and a sustainable environment. Furthermore, under such a premise, the State should be capable of promoting the generation of widespread social basic needs for the country's

population demands, such as employment, food, healthcare, housing, education, and social security. Without overlooking the imperative to emphasize investment in science and technology (%GDP), social spending (%GDP), and a moderate Gini coefficient or income distribution within the country or region with minimal wealth polarization within it, as is currently the case in the most balanced market economies under today global context, such as the Scandinavian countries, i.e., Sweden, Norway, Denmark, Finland, but also Switzerland and Canada in America, etc.

Although the above definition is a summary or extreme simplification of the problem involved in classifying the type of development prevailing between peripheral and developed economies in a global context, it is nonetheless a useful representation. It shows a reality that allows us to classify or differentiate the degree of development between the two groups of countries under the current global context. This finding was observed based on an empirical sample of indicators on the behavior of both groups of countries worldwide with information from the period 1980–2020, with statistics from international organizations such as the World Bank and Interamerican Bank for Development, ECLAC, OECD, etc., *vid*, Luis-Pineda, O. (2021b).

Under the above premise, it is clear that in the Americas, only Canada fits the prototype of a balanced and socially inclusive economy. Mexico, although on the right path, does not yet fit into this category. Although we are confident it will possibly achieve this status in the medium and long term, provided the current path of inclusive and sustainable growth, characterized by strong state involvement in the economic stewardship of national economic activity, is maintained for the coming years.

Unfortunately, in the Latin American region, as well as in most of the peripheral regions, including high-growth emerging economies such as the BRICS, do not yet fit into this category either. As we previously highlighted, only countries such as the Scandinavian countries and other and other economies of the European Union, such as Switzerland, meet these standards. Namely, countries characterized by having "welfare economies" where the State plays a decisive role in designing the country's economic path and characterized by having mature democratic regimes, with no racism, poverty and social

exclusion practices are allowed by the State, where on the contrary, there exist a strong social participation and political awareness to determine the best economic path for the country according to the best social demands of the population, vid, Luis-Pineda, O. (2021b).

Under the current global context, in either peripheral or emerging States like Mexico, the role of the State is not only necessary but fundamental. It cannot overlook its social responsibility to foster the levels of growth and well-being that its population demands, and not leave it to the free market forces as happen during the neoliberal framework that has dominated the political scene in Latin America and other peripheral states, including Mexico, for the last forty years, as we advocate in a recent analysis by this author, vid, Luis-Pineda, O. (Dec. 27, 2024).

Therefore under the above basic premise, the role and involvement of the State is then unavoidable in establishing routes for balanced growth within the regions and entities that make up the Macrosur in Mexico, up to the municipal level (urban development) and directing socially inclusive regional policies that take advantage of the productive vocation of each municipality and respective federative entity to promote productive linkages (economic and commercial) with their municipalities with their municipal counterparts at the level of the entity itself and the regional level, seeking to integrate them under a regional development plan using the "Well-being Poles" approach, and thus minimizing the risk of economic and social polarization and the generation of externalities associated with these mega-investments, by the political power in charge of implementing development plans at the local level, in the absence of a regional planning framework by the State, at its different levels. And to deter repeating the regrettable experience of the maquiladora industry in the north of the country, discussed above, as well as other existing regional and urban imbalances in the country, such as the macrocephaly of Mexico City and myriad externalities affecting important region such as Mexico's Central Region, vid, Luis-Pineda, O. (2022.B).

#### IV. PERSPECTIVES

The economic strategy implemented by Mexico since the previous administration, vid (PND-AMLO), has been generating so far good

results for Mexico, to the point that there is currently talk of a new or second "Mexican Miracle" for the country, the first reflections of which are manifested at the macro level with the high growth rates observed after the pandemic, highlighting a strong trend toward greater growth for the coming years, vid Torres, O. (Aug 18, 2023). An economic path that is beginning to produce its first fruits in the Macrosouth region and its englobed economic regions and federal states, which had been traditionally lagging behind the rest of Mexico, as some analysts report, are now reported growing at twice the rate of the national economy, vid, Yorio, Gabriel (Sep 24, 2023).

The aforementioned is a consequence of the substantial investments channeled by Mexico toward this macroregion, but along with sound management and implementation of macroeconomic variables and public policies by the Mexican state at the federal level, and their implementation at the regional level. Approach with a stark contrast to that applied in Mexico during past neoliberal regimes in the neoliberal era, which prioritized at-all-cost growth, overlooking social well-being and the environment. Its obsolescence and the imperative to reorient it were previously highlighted, as it was economically and socially unviable for the country, as we have been pointing out for over a decade, vid, Luis-Pineda, O. (2008).

Accordingly, the new strategy implemented by Mexico in Macrosouth implies a close involvement of Mexican state in the supervision of federal investments focused into Macrosouth to the above referred megaprojects to fulfill the targets envision in the national strategy PND 2018-2024 (AMLO's administration) and its continuation for 2025-2030 period (Sheinbaum's administration) aims to promote growth and social inclusion and sustainable use and preservation of natural resources and implement regional strategies in close supervision by Mexican state, vid, Luis-Pineda, O.(Dic27, 2024).

However, for Mexico, achieving a shift in its economic model toward one with social inclusion and sustainability, despite having in its front door a neighbour such as the US, considered to be the world's leading military power, with a warlike history behind, this is not an easy task. It entails a huge challenge for Mexico. Since it implies more than good desires and goodwill from the US to accept this change. Especially under the historical background that the US has invaded Mexico several

times in the last two centuries, during which in XIX took place the largest US invasions into a Latin American country in American history (Mexican-US war, 1845–48) where the US came out seized more than 50% Mexican territory by force, *vid*, Mendez S., Ricardo (2022). And later on, the country faced subsequent diplomatic harassment and meddling for myriad political excuses, as noticed by Dominguez, A., *vid*, Dominguez, Arturo (Aug 28, 2024). Especially in recent years, since Mexico decided to shift its economic strategy, departing from the hegemonic IMF recommendations, and AMLO's historically courageous decision to implement Mexico's new economic growth path according to its real domestic interests. A strategy that has fortunately been endorsed by Mexico's current new president, Claudia Sheinbaum, to date until 2030 at least.

## V. GENERAL CONCLUSIONS

- Mexico's Macrosouth recovery can then be explained as the result of a democratic regime for the first time in Mexican history featuring a non-neoliberal orientation and a nationalist and left-wing vision seeking to implement a non-neoliberal economic path, advocating a socially inclusive strategy committed to reducing poverty and the evident socioeconomic asymmetry between the two aforementioned macroregions, with ancestrally unequal and asymmetrical development, as we have overwhelming shown based upon the indicators examined above.
- However, despite its abundant natural resources, the Macrosouth region has remained mired in poverty for years (*vid*, Correa, Ernesto (Aug 3, 2014), and with a population plagued by poverty, seeking to always "improve" its social and human development for decades, *vid*, Candelas R., Roberto (2014). In the face of the indolence and corruption prevailing in previous regimes, focused on irrational exploitation of the resources of this macroregion, such as the unsustainable extraction of oil resources during the oil boom (Tabasco and Campeche), as well as the unrestricted exploitation of the Mayan region's tourism wealth until recent years.
- That is why during AMLO's regime, started implementing a socially inclusive economic strategy, using the country's domestic savings to finance large megaprojects such as the Mayan Train itself and the Tehuantepec Trans-Isthmus Corridor, as well as other important collateral megaprojects

that are also relevant to the region and the country, such as the Dos Bocas Refinery in Tabasco, within this region. The bottom line was to foster the creation of regional development hubs along the Transisthmian belt of the Gulf of Mexico with the idea of connecting both regions through the implementation of the Mayan Train, and the other, on the Gulf and South Pacific side, through the Trans-Isthmus Corridor. Each with different, albeit complementary and closely linked, objectives.

- On the other side, the Maya Train megaproject, the flagship project of the previous administration, according to some sources such as Infobae, *vid*, Infobae (January 24, 2020), seeks to decentralize investment and capital from the tourism industry around the Maya zone up to the Gulf Region, and to spread its benefits and impact currently concentrated in the Maya zone to other tourist communities in the Southeast, far away such as Coatzacoalcas, Veracruz, a distance of more than 1,500 km from the Mayan Riviera, along the Gulf Region, on the Atlantic coast.

The whole idea behind this strategy was to integrate and stimulate the economic growth in the communities (and stops) where this train arrives and to promote greater economic and commercial activity among them, for the direct benefit of their local populations. Municipalities were largely ignored by the traditional tourism industry, but also by federal authorities throughout the neoliberal period, highlighting the fact that the population of this macroregion has been the only one to see its standard of living decline over the years, *vid* Ataide, Melania, (2017).

- On the other side of the Macrosouth region, the Transisthmian-Mexican Corridor, just over 300 km long, has a social outlook not far from that depicted for the Maya Train municipalities. However, the economic perspectives for this Corridor are more promising than the Mayan railway, albeit complex, for Mexico. Given its great geostrategic location and geoeconomic and geopolitical importance for Mexico, particularly under the current global context in which we are immersed, with a length of barely 300 km but with branches that rival the length of the Maya Train (1,500 km), it is crucial for Mexico at this time for the following reasons, *vid* Luis-Pineda, O. (Jul 23, 2023).
- The Corridor is expected to fully rival, at least in the medium and long run, the Panamanian Canal, facilitating not only the flow of goods and passengers between the ports of Coatzacoalcas

(Atlantic) and Salina Cruz (Pacific) through Line FA–railway (of the Transisthmian Railway) and its connection to the Mayan Railway in Palenque, Chiapas, but also, through its another branch (Line K), making it possible to connect Ixtepec, Oaxaca (in the Isthmus region) to Cd.Hidalgo, Chiapas at the very border of Guatemala and South America, thus triggering economic growth in the South Pacific region (Guerrero, Oaxaca, and Chiapas) through the flow merchandise and passengers between the all the connected communities served by the Transisthmian Railway (Line K) and the Mayan Railway along the Gulf of Mexico.

- Accordingly, the integration of all this railway and associated logistics infrastructure within the Corridor will enable the integration of nothing less than a Trans-Isthmus Corridor Railway System within the Macrosur, since its interconnection with the Mayan Train through the FA line of the trans-isthmus with the Maya zone but also with South America through the K line from Ixtepec, Oaxaca, in the Isthmus of Tehuantepec zone, to the border with Guatemala, making it possible to close the "virtuous railway system" and boost, via rail, the flow of cargo and passengers within the entire Macrosouth for the coming years and thereby stimulate the economic growth within this macroregion and the social inclusion in this important and geostrategic Mexican macroregion, vid, Luis-Pineda, O. (Oct 10, 2023) and also vid, Luis-Pineda, O. (Oct 14, 2024).

## VI. FOR SEVERAL REASONS

Firstly, the imperative of leveraging the USMCA (TMEC) between Mexico, the US and Canada. In the current global context, leveraging Mexico's comparative and competitive commercial and economic advantages to maximize the Macrosouth's advantages and the country's overall position in global trade becomes of utmost importance. Accordingly, these megaprojects and logistics created in the Macrosouth attempt not only to foster growth but also to promote people's well-being and a sustainable environment within this macroregion and in Mexico in general, compared to other trading blocs in today's global market. And seeking to minimize the impact of crises arising from geopolitical and geoeconomic pressures from Mexico's main trading partner, as it is already happening nowadays, as Trump's Tariffs' current war against Mexico and other countries, vid, Renshaw Jarret et Al. (Jul 12, 2025).

Secondly, because Mexico is one of the most open economies in the world, as reflected in the more than 46 international treaties signed with other economies, and the opportunity to take advantage of this situation, vid, KensaLogistics (2023). The current bottleneck in the Panama Canal makes the Mexican Corridor, becoming overnight an unprecedented competitive advantage for Mexico as opposed to other nearby interoceanic crossing options, becoming a key element in triggering growth in the trans-isthmus region of Tehuantepec, vid, DW.com (Apr 10, 2024).

Thirdly, the interconnection between the Mayan Train and the Trans-Isthmic railway in Coatzacoalcas will expand the tourism and cargo flow between the Mayan zone and the South Pacific along the Trans-Isthmic belt on the Pacific coast. This will contribute to accelerating the expansion of the existing Transisthmian railway network, which connects Ixtepec (Oaxaca) to Ciudad Hidalgo (Chiapas) on the border with Guatemala in Central America. Hence, boosting growth and jobs in the Macrosouth region through this rail network, to the rest of the region. Furthermore, the Corridor expects to move at least 1.4 million containers shortly, vid Forbes (Nov. 9, 2022).

Fourthly, but no less important, the imminent incoming of foreign investment in the trans-isthmus belt, lured by a nearshoring productive scheme, will take advantage of the Corridor's geostrategic location and the facilities granted by Mexico to establish itself in that region, generating growth and jobs but also potential negative implications for Mexico if the necessary measures are not taken from the Mexican States to prevent once again the bitter experience of Mexico's Northern states with the assembly industry (Maquiladora) given the growing interest of foreign capital in investing in the Macrosur region vid, Ávila R. Agustín (Apr 12, 2018). Thus the expected economic dynamism stemming from the crossing of passengers and cargo between the Atlantic and Pacific oceans, and vice versa and its connection with the Mayan Railway system along the Gulf of Mexico, is likely to impact economic growth and jobs within the entire Macrosouth since will involve not only the crossing of goods and people but also entails adding aggregate value to the incoming goods entering the Corridor, whether coming from abroad or domestically, for their eventual re-exportation to the global market, through this transoceanic facility.

Lastly, in this respect, it is worth mentioning the case of China's foreign capital inflows into the Macrosouth region, as it encompasses a wide range of important sectors such as energy and transportation. As shown by China's interest and strong investments into Mexican oil industry megaprojects implemented in the region, such as the construction of the Dos Bocas Refinery in Tabasco, along the Gulf of Mexico, and the Mexican Corridor megaproject along the Tehuantepec transisthmian belt, since the very beginning of both megaprojects, *vid*, Expansión (Jan 13, 2020).

The aforementioned interest from China becomes clear and explainable since this country expects to use this interoceanic facility to move at least 30% of its total exports through the Mexican corridor, which entails an expected and unprecedented economic impact for the Macrosouth region in the coming years, *vid*, CM.org (Jul 29, 2020). Which entails a very important challenge for Mexican authorities to bear in mind and assess that along the expected benefits for the region come also likely negative impacts and externalities spilled over effects over the region which might eventually override and compromise Mexico's regional balanced and socially inclusive targets sought in Mexico's current national economic strategy, Plan Nacional de Desarrollo(PND), *vid*, PND(2025-2030).

## VII. RECOMMENDATIONS

We deem pertinent herein to highlight some foreseeable challenges and pertinent recommendations in this regard, which we consider unavoidable or essential for the Mexican State if it attempt to implement a socially inclusive and sustainable approach in the Macrosouth region by the current economic path proposed by the federal government within the framework of the National Development Plan (2025-2030). This approach also leverages the flow of investments already channeled toward this macroregion and maximizes the use of the aforementioned megaprojects, as well as other foreign and domestic investments focused on this macroregion in the coming years.

- First, it is imperative to consider the productive integration of the municipalities and entities served by both trains. Through the implementation of the concept of "Wellbeing Hubs" across all nearby communities (municipalities) where these megaprojects (both the Mayan Train and the Trans-Isthmus Corridor) converge through

productive linkages (supply chains) to be able to export their surpluses within and outside the Macrosouth region and abroad. In this way, it is expected to boost the local economy of these communities and foster inclusive regional development around them.

- Under the above premise, prioritizing the integration of the local productive apparatus (SMEs) into the production process of foreign companies to be established or established in the regions as partners (non-maquiladoras) with direct mediation and support from the Mexican State to support them with federal financing or support and the organization of local producers, so that they are not marginalized from the growth fostered by these major investments. And promote agreements between the State and transnational companies to effectively achieve a technology transfer to the local producers through agreements between the government and these companies, thus avoiding the experience of the export-oriented maquiladora industry in northern Mexico.

- Leverage local resources and infrastructure available through the Mayan Train and Transisthmian Corridor as a means of transporting cargo and passengers within the Macrosouth region to strengthen the local productive apparatus, aiming to generate added value for locally produced products (agricultural, artisanal, etc.), oriented to firstly to meet local demand and then export surpluses via the Trans-Isthmus Corridor in the South Pacific region as an export platform to international markets.

- Under the context of a largely backward and impoverished macroregion, prioritization of hiring primarily local labor over labor from other regions of the country or from abroad becomes of utmost importance, particularly that coming from abroad and South America. Unless there is a tacit agreement from Mexican authorities have not yet established "employment quotas" for the foreign labor force once the local supply of human capital for production is met. Without prejudice to the federal and local governments' promotion of the imperative specialization or retraining of Mexico's workforce in response to the domestic demand from foreign or Mexican companies to establish themselves in the Macrosouth in industrial parks, along the Transisthmian belt but also in accordance to Mexico's priorities or strategic areas, under the national strategy on the matter and the educational infrastructure of local universities.

- To inhibit the imminent local workforce overexploitation by either foreign or domestic investors established or to be established in the region, given all the facilities (savings) granted by the Mexican government, the State must intervene on behalf of Mexican workers, establishing wage policies to systematically revalue Mexican local labor prices compared to that prevailing among our trading partners, the US and Canada, and other industrialized economies seeking to establish themselves in Mexican territory. This is something that is beginning to be partially implemented on the northern border to reduce the asymmetric labor cost between the US and Mexico. Likewise, promote schemes to restrict or discourage the wave of immigrants or labor from other regions of the country or abroad. Although this represents a serious problem for Mexico, particularly for the Macrosouth region in the years to come, as this region is the natural gateway to the United States. Unfortunately, many immigrants blend in with the local population and generate externalities for the region's major municipalities, *vid*, Angeles Cruz, Rogelio (Angeles, 2007). This situation is particularly worrying given the start of establishing the first five foreign companies out of the ten planned industrial hubs in the trans-isthmus belt offered by Mexico through the Ministry of Economy, *vid*, Tapia C., Patricia (Tapia, 2023).

On the environmental front, nurturing sustainable production schemes by foreign and Mexican companies established in the Macrosur region becomes important, both on the Maya Train railway and the Trans-Isthmus Corridor side, so that their processes adhere to local and international regulations. This is to prevent a repeat of experiences such as those of the mining companies of Grupo México, a transnational corporation that obtained multiple concessions during the neoliberal era and systematically caused environmental disasters with high social costs, pollution of rivers and seas, and toxic substances, harming the country and communities in the localities where they have established themselves, as in the case of Grupo México, *vid*, Rojas, Ana Gabriela (Aug 6, 2019). In the face of the acquiescence of neoliberal governments, the current administration has inexplicably been unable to withdraw these concessions, as it did in the Ferrosur case for a section of the Trans-Isthmus Corridor, *vid* Luis-Pineda, O. (Jul 23, 2023).

Under the same previous line of thought, discouraging obsolete and unsustainable

agricultural production practices in domestic agriculture, such as "cut-and-burn forest clearing" for corn planting ("roza y quema"), a pre-Columbian American culture's practice in agriculture, etc. At the urban level, prioritize environmental education among the population, including in schools and local authorities, to preserve water resources and garbage recycling and solid waste, etc., and, in general, to preserve the vast biodiversity located in this region. Likewise, encouraging appropriate territorial reorganization for human and industrial settlements, aimed at reducing regional and rural imbalances associated with the ongoing industrial, tourist, and residential expansion in the region, stemming from uncontrolled urban growth of the region's main municipalities in response to new investments.

In order to promote local permanent job generation within the region, it is very important to support the exporting of handicrafts and, in general, local goods produced within the region, preferably adding value to them for export via the Corridor. Without neglecting the pursuit of formal policies of inclusion and respect for local culture and idiosyncrasies, in the local public schools and universities within this macroregion (which, entails as well the strengthening Mexican indigenous languages such as Mayan, Zapotec, Zoque, etc., along with the exposure of major foreign languages such as Chinese, English, French, German, etc.), as well as fostering the labor profiles from local formal education system of the universities in this macroregion, this way facilitating its incorporation into labor force of established enterprises located the region and those required by the local economy. Along with the implementation of public policies aiming to discourage the ongoing transculturation process of Mexican cultural wealth in this macroregion and strengthen it in the face of current economic and cultural globalization, with a US vision. In other words, nurturing local cultures and idiosyncrasies becomes imperative as it contributes to achieving a socially inclusive society in this macroregion based on respect for Mexican ancestral sociocultural values and heritage vis-à-vis the rest of the world.

Lastly, but not least important, prioritize consumption of local products and support local small and medium-sized enterprises (SMEs) that produce local products with local inputs in the Macrosur region for the export market through the Corridor.

Deterring food practices for local population such as the consumption of "junk food" in this macroregion by favoring nutritious local foods consumption and the on going predatory culture devastating our natural resources and waste disposal practices and exacerbated consumerism prevailing in our northern neighbors, namely US, with the consequence social and environmental implications, along with other externalities such as the recent gentrification problem on highly touristic areas in the Macrosur (such as the Mayan Riviera zone), vid, Busby Matha(Sep 19, 2022) and other regions of the country, in light of the recent boom of the Mexican economy as opposed to other countries in the Latin American region and also incoming immigration from other countries outside the region, such as Mexico's northern neighbors, as the United States and Canada and China stemming from Mexico's laxity of its immigration laws but also lured by the abysmal living cost differential between Mexico and such countries. Thus encouraging this inflow into Mexican territory, with myriad effects and thus impacting local Mexican inhabitants of such municipalities (mostly touristic zones, Mayan Riviera, etc.) and displacing local inhabitants toward other regions, making property and services more expensive in the municipalities where these foreigners settle. Where indigenous people are affected especially around tourist hotspots on the Riviera Maya, such as Tulum and Cancun are facing losing their homes as land is sold for luxury housing. And other important urban areas such as Mexico city metropolitan area, vid, López, Oscar (Jul 15, 2025). Albeit in this particular case there has been an awakening of the State intervention to tackle this ongoing problem after the recent mass protests, Vid, Lemos, Gerardo et al. (Jul 17, 2025).

However, all of these last recommendations, additionally to those mentioned above, necessarily entail the State intervention or involvement to protect local producers and people's social interests, under the basic premise of a State with strong support and social vision committed to the well-being of the majority, to achieve a truly socially inclusive and sustainable development within this strategic macroregion of the country in the years to come, vid, Luis-Pineda, O.(Dec 27, 2024).

## VIII. REFERENCES

1. Ángeles Cruz, Hugo (2007). "Migraciones contemporáneas de la región sur-sureste de México". El Colegio de la Frontera Sur: Universidad Autónoma Benito Juárez de Oaxaca. Instituto de Investigaciones Sociológicas. En:Detalles de: Migraciones contemporáneas en la región sur-sureste de México › SIBE Koha (ecosur.mx)
2. Ataíde, Melania(Aug 27, 2017). "Sur-sureste, única región del país con disminución del poder adquisitivo". Apud. El Economista 27 de agosto de 2017. En: <https://www.eleconomista.com.mx/estados/Sur-sureste-una-region-del-pais-con-disminucion-en-el-poder-adquisitivo-20170827-0103.html>
3. Ávila Romero, Agustín (Apr 12, 2018). "El sur-sureste de México en la mirada del capital- transnacional". Apud. Alainet.org. At: <https://www.alainet.org/es/articulo/192210>
4. BMx (Aug 3 2019). "El Sureste, La Joya del país". Apud. Periódico PorEsto. August 3, 2019. At: <https://www.poresto.net/quintana-roo/2019/8/3/el-sureste-la-joya-del-pais-115567.html>
5. Candelas Ramírez, Roberto(2018). "Los estados del sur sureste de México. En búsqueda del desarrollo humano". Apud. CESOP. Centro de estudios sociales y de opinión pública. Cámara de diputados.At: [www3.diputados.gob.mx/camara/content/download/297199/.../file/informacion.pdf](http://www3.diputados.gob.mx/camara/content/download/297199/.../file/informacion.pdf)
6. Circuitotinto.org (Dec 7, 2019). "Mega Proyecto de AMLO: Corredor Multimodal Interoceánico: Un Proyecto de infraestructura detonante económico para la zona del Istmo de Tehuantepec.Apod.Circuito Tinto.Org. Diciembre 7, 2019. En: <https://youtu.be/OsIFX4GjWqgS>
7. CM.org(Jul 29, 2020). "Países asiáticos utilizarán el Corredor Interoceánico para mover el 30% de sus mercancías". Conociendo México.Org.Jul29,2020.En: <https://youtu.be/m9l2lMiwwaA>
8. Correa, Ernesto(Aug 3, 2014). "Sur-sureste: pobres entre la riqueza". Apud.Imagen.agropecuaria.com.03agosto,2014. En: <http://imagenagropecuaria.com/2014/sur-sureste-pobres-entre-la-riqueza/>
9. Dominguez, Arturo (Aug 28, 2024). "The U.S. Meddling in Mexico's Politics is More Authoritarian-Imperialism".Apud.The-Antagonist.At: <https://www.antagonistmag.com/2024/08/28/the-u-s-meddling-in-mexicos-politics-is-more-authoritarian-imperialism/>
10. DW.com(Abr 10, 2024)."Canal de Panamá

- espera normalizar tránsito de buques en 2025".At:  
<https://www.dw.com/es/canal-de-panam%C3%A1-espera-normalizar-tr%C3%A1nsito-de-buques-en-2025/a-68781248#:~:text=El%20canal%20de%20Panam%C3%A1%20dijo,del%20mundo%20de%20agua%20dulce>.
11. Expansion(Jan 13,2020). "China invierte 600 mdd en la refinería de Dos Bocas". Revista Expansión. At:  
<https://expansion.mx/economia/2020/01/13/china-invierte-600-mdd-en-la-refineria-de-dos-bocas>
12. Fariza, Ignacio (Sep 15, 2017). "El sur de México se queda atrás". Apud. El País. Sep 9, 2017. At:  
[https://elpais.com/economia/2017/09/14/actualidad/1505421581\\_628441.html](https://elpais.com/economia/2017/09/14/actualidad/1505421581_628441.html)
13. Forbes (Nov 9,2022). "Corredor Interoceánico en México moverá 1.4 millones de contenedores al año". Apud Forbes, at:  
<https://www.forbes.com.mx/corredor-interoceanico-en-mexico-movera-1-4-millones-de-contenedores-al-ano/>
14. García, Karol (Sep 9, 2019). "Otorgarían 41,300 millones de pesos a Dos Bocas". Apud. El Economista. 09 Septiembre, 2019. En:  
<https://www.eleconomista.com.mx/empresas/Otorgarían-41300-millones--de-pesos-a-Dos-Bocas-20190909-0020.html>
15. PODEBIS.Gob.Mx(2023)."Polos de Desarrollo para el Bienestar(PODEBIS)". At:  
<https://www.gob.mx/ciit/articulos/polos-de-desarrollo-para-el-bienestar-podebis?idiom=es>
16. Gollás, Manuel (1982). La Economía Desigual: Empleo y Distribución en México. CONACYT. México. 1982
17. Guillén, Arturo (2012)[8]."México, ejemplo de las políticas antidesarrollo del Consenso de Washington". Estudios Avanzados [online]. 2012, vol.26, n.75, pp.57-76. ISSN 0103-4014. En:  
<http://dx.doi.org/10.1590/S0103-40142012000200005>.
18. Infobae(Ene.2020)."TrenMaya: elmegaproyecto emblema de LópezObrador ya tiene fecha de inicio".Apud Infobae.com.En:  
<https://www.infobae.com/america/mexico/2020/01/24/tren-maya-el-megaproyecto-emblema-de-lopez-obrador-ya-tiene-fecha-de-inicio/>
19. Kensa.Logistics(2023)."Principales acuerdos comerciales de México en 2023". Apud. Kensa Logistics. At:  
<https://www.kensalogistics.com/principales-acuerdos-comerciales-de-mexico-2023>
20. Lemos, Gerardo et al. (Jul 17, 2025)."Mexico City unveils plan to tackle gentrification after-mass-protests",at:  
<https://edition.cnn.com/2025/07/17/americas/mexico-city-gentrification-plan-protests-intl-latam>
21. López, Oscar(Jul 15, 2025). "Backlash against Mexico City gentrification echoes global anger-at-overtourism-and-rising-rents".Apud. The-Guardian.com,At:  
[https://www.theguardian.com/world/2025/jul/15/backlash-against-mexico-city-gentrification-echoes-global-anger-at-overtourism-and-rising-rents?utm\\_source=chatgpt.com](https://www.theguardian.com/world/2025/jul/15/backlash-against-mexico-city-gentrification-echoes-global-anger-at-overtourism-and-rising-rents?utm_source=chatgpt.com)
22. Luis-Pineda, O.(1998). La Maquila en México. Análisis y Perspectivas. Edit.IPN.1998
23. Luis-Pineda, O.(1998 bis). Impacto Socioeconómico de la Industria Maquiladora de Exportación en México. Edit. IPN.1998 bis
24. Luis-Pineda, O.(2000). "La Problemática Ambiental en la Industria Maquiladora". Revista Economía siglo XXI. Revista Economía siglo XXI. ESE-IPN, Vol.1, Nos.2-3, abril-septiembre, 2000. pp.49-66
25. Luis-Pineda,O.(2006)."Desequilibrio Regional e Insustentabilidad en México: El Exodo Maquilador Hacia la Región Sur-Sureste".Revista.Eseconomía, No.10, Abr-Junio, 2006., pp.47-73.
26. Luis-Pineda, O.(2008). Hacia la Reconversión del Modelo Económico Mexicano: Un Imperativo Frente al Nuevo Milenio. Edit.IPN.2008.
27. Luis-Pineda, O.(2021). "Los Megaproyectos Transmítico y Tren Maya en México: Algunas Implicaciones a Nivel Estatal y Municipal". Proyecto. Investigación. SIP.IPN.2021.06859)
28. Luis-Pineda, O. (2021a)."Socially Inclusive Versus Uneven Development: Developed and Peripheral Economies in a Global Context".At:  
[https://globaljournals.org/GJHSS\\_Volume21/2-Socially-Inclusive-Versus.pdf](https://globaljournals.org/GJHSS_Volume21/2-Socially-Inclusive-Versus.pdf)
29. Luis-Pineda, O.(2021b) "Desarrollo Balanceado versus Desequilibrado en la Globalización: Europa, Escandinavia versus Latinoamérica". At:  
[http://www.scielo.org.mx/scielo.php?pid=S2448-66552021000100211&script=sci\\_arttext](http://www.scielo.org.mx/scielo.php?pid=S2448-66552021000100211&script=sci_arttext)
30. Luis-Pineda, O. (2022.B)."A Socially Non-Inclusive Urban-Regional Development in Mexico: The Macrocephalic Growth of Mexico City in the Center Region". At:  
<https://drive.google.com/file/d/18k774aag58MU TcqU58jzC9R4L9nOD2Zu/view?usp=sharing>
31. Luis-Pineda, O.(Jul 23, 2023).E-Book.Chap."The

- Relevance of the State Involvement in the face of a Sustainable and Socially Inclusive Economic Strategy in Mexico, the case of its South-southeast Region as a Likely Socially Inclusive and Sustainable Regional Development Pole in the Country". At: <https://doi.org/10.56238/levv15n38-O91>
32. Luis-Pineda, O.(Oct 14, 2024b).Book.Chap: "Tren Maya y Corredor Transmisco en la Macrosur Frente a un Desarrollo Socialmente Incluyente en Mexico en México". At: [https://drive.google.com/file/d/17SBUIR6bBR1zLV2dO9YR5BYgDt5BNXA-/view?usp=drive\\_link](https://drive.google.com/file/d/17SBUIR6bBR1zLV2dO9YR5BYgDt5BNXA-/view?usp=drive_link)
  33. Luis-Pineda, O.(Oct14, 2024a). "Mexican Interoceanic Corridor: Toward a Likely Sustainable, Likely Socially Inclusive and Sustainable Region in Southwestern Mexico". At: <https://doi.org/10.56238/sevened2024.031-007%20>
  34. Luis-Pineda, O. (Dec 10, 2023). E-BOOK.Chap 3."Tren Maya y Corredor Transmisco en la Macrosur frente a Desarrollo Socialmente Incluyente en Mexico". At: [https://drive.google.com/file/d/17SBUIR6bBR1zLV2dO9YR5BYgDt5BNXA-/view?usp=drive\\_link](https://drive.google.com/file/d/17SBUIR6bBR1zLV2dO9YR5BYgDt5BNXA-/view?usp=drive_link)
  35. Luis-Pineda, O.(Dic27, 2024). E-Book.Chap."Peripheral' State Responsibility Under Globalization vs Social Exclusion And Sustainability: A Challenge for Mexico and Latina America in the Current Century". At: <https://doi.org/10.56238/arev6n4-449>
  36. Marín Mollinedo, Rafael (Jun 23, 2019)."El Gran Proyecto de Desarrollo del Istmo de Tehuantepec - Corredor Interoceánico". Apud. ADN. Opinión. Entrevista con. Responsable Proyecto. Jun 23, 2019.En: <https://youtu.be/vzB-v82vnDo>
  37. Martinez, R. Rubi et Al. (2016). "El Consenso de Washington: la instauración de las políticas neoliberales en América Latina". At: <https://www.scielo.org.mx/pdf/polcul/n37/n37a3.pdf>
  38. Méndez S., Ricardo (2022).Apuntes Para la Historia de la Guerra entre México y los Estados Unidos. En: Tres Libros sobre la Guerra Estados Unidos de América-México, At:[https://docs.google.com/document/d/1lcd9iD2JD3Mmtvht4HuOMrBqw2T7G6cneoU\\_6\\_c3Dzs/edit?tab=t.O](https://docs.google.com/document/d/1lcd9iD2JD3Mmtvht4HuOMrBqw2T7G6cneoU_6_c3Dzs/edit?tab=t.O)
  40. PND.Gob.Mex(2025-2030). Plan Nacional de Desarrollo (2025-2030). Gob.Mex. At: <https://www.gob.mx/bienestar/documentos/pla-n-nacional-de-desarrollo-2025-2030-388018>
  41. PND.AMLO(2019-2024). Plan Nacional de Desarrollo. Gobierno de México. En: <https://lopezobrador.org.mx/wp-content/uploads/2019/05/PLAN-NACIONAL-DE-DESARROLLO-2019-2024.pdf>
  42. PODEBIS.Gob.Mx(2023)."Polos de Desarrollo para el Bienestar(PODEBIS)".At: <https://www.gob.mx/ciit/articulos/polos-de-desarrollo-para-el-bienestar-podebis?idiom=es>
  43. Ramírez, Roberto (2018). "Los estados del sureste de México. En búsqueda del desarrollo humano".Apud. CESOP. Centro de estudios sociales y de opinión pública. Cámara de diputados.En: [www3.diputados.gob.mx/camara/content/download/297199/.../file/informacion.pdf](http://www3.diputados.gob.mx/camara/content/download/297199/.../file/informacion.pdf)
  44. Renshaw Jarret et Al.(Jul 12, 2025)"Trump intensifies trade war with threat of 30% tariffs on EU, Mexico".Apud.Reuters.At:<https://www.reuters.com/business/trump-announces-30-tariffs-eu-2025-07-12/>
  45. Rojas, Ana Gabriela(Aug 6, 2019)."Grupo México: la polémica multinacional detrás de uno de los peores desastres de la industria minera en el país". Apud. BBC.com.Ago 6, 2019. En: Grupo México: la polémica multinacional detrás de uno de los peores desastres de la industria minera en el país - BBC News Mundo
  46. Tapia C., Patricia(Jul 26, 2023)."Corredor Interoceánico: los primeros polos atraen a más de 30 empresas cada uno". Apud. Forbes. Jul 26, 2023. At: Corredor Interoceánico: los primeros polos atraen a más de 30 empresas cada uno (forbes.com.mx)
  47. Torres, Octavio (Aug 18, 2023)."2023 será el mejor año económico de AMLO, ¿Es el inicio de un nuevo Milagro Mexicano?". Apud.Expansión. En: 2023 será el mejor año económico de AMLO: ¿Un nuevo 'milagro mexicano'? (expansion.mx)
  48. Vargas, Martin(Jan 1, 2017). "Corredor interoceánico, la promesa de PorfirioDíaz". Apud. nvnoticias.com. Enero 01, 2017. En:<https://www.nvinoticias.com/nota/48876/corredor-interoceanico-la-promesa-de-porfirio-diaz>
  49. Yorio, Gabriel(Sep 24, 2023). "Los estados del sur crecen al doble de la economía mexicana: Gabriel Yorio". Apud. El Financiero. En: <https://www.elfinanciero.com.mx/economia/2023/09/24/los-estados-del-sur-crecen-al-doble-de-la-economia-mexicana-gabriel-yorio/>

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# Curriculum Evaluation and the Democratic Republic of the Congo Self-defense: A Way to Peace

Etienne Mupemba Kabwe Kantanda<sup>5</sup>

## ABSTRACT

*The war in the East of the Democratic Republic of the Congo has revealed that this country needs weapons for its self-defense and development. Education can solve this problem if it provides appropriate knowledge, which can endow students with abilities to defend and develop their country. Education is the basis of the development of any country. The backbone of education is curriculum. This one must be well-designed so as to endow students with skills to defend and develop the country. This article aims to analyze the DRC civil engineering curriculum so as to see whether it can help the DRC to develop its armament. To reach this objective, this article attempts to answer the question "Does civil engineering curriculum provide the Congolese students with appropriate knowledge for weapon manufacture for their self-defense?". After the analysis of some courses planned in the civil engineering curriculum, the results indicate that the curriculum is well designed, but it lacks government support. As a consequence, the country cannot manufacture its own weapons.*

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## I. INTRODUCTION

The Democratic Republic of the Congo (DRC) has been a victim of external threats and internal conflicts for many years. During these horrible

external threats and internal conflicts, many Congolese, in the Eastern Part of the DRC, have been killed, and many women and young girls have been violated. This horrible situation shows clearly that the Democratic Republic of the Congo has to

reinforce its defense. What can make a country powerful and able to defend itself is its own weapon manufacturing. Therefore, the DRC needs a well-designed curriculum in its universities and colleges so that its students can be trained in manufacturing weapons in collaboration with the DRC army. The objective of this investigation is to analyze the DRC civil engineering curriculum so as to see whether it can help the DRC to develop its armament. The DRC must become a powerful country so as to afford all sorts of external threats and internal conflicts. The question that guides this investigation is 'Does the DRC civil engineering curriculum provide Congolese students with appropriate knowledge for weapon manufacture for country defense?' The DRC, as an independent country, must have a civil engineering curriculum that contributes to its defense. To confirm or reject this assertion, some courses in the DRC civil curriculum are analyzed with the Content Analysis Method.

## II. BACKGROUND

No country in the world can be at peace if it does not have its own means of self-defense. To have its own means of self-defense, the country has to implement appropriate and adapted curricula in its universities and colleges because good education is a solution to the country's problems. This is supported by Adelayo and Olusegun (2022: 49), who argue that "curriculum planning emphasizes that education should serve to enable society to achieve its needs and aspirations". This is to say that a well-designed curriculum offers education which is indispensable for the country's defense and development. Pangestu and Sukardi (2019:173) support this idea when they say that "education for a country is a quite significant matter in improving human resources to be able to compete with other countries". This is true because there are countries that, with regard to their powerful army and economy, want to keep their position of superiority over other countries. These countries are right. It is up to each country to enhance its army and economy. This is possible if the country focuses on the education of its people. Ayeni and others (2024:65) add "the role of university education is germane in enhancing the socio-economic development of society". The Democratic Republic of the Congo is one of the biggest African countries. Its soil and underoil have plenty of ores. The presence of important ores in the DRC

underoil causes and will always cause external threats and internal conflicts. Therefore, the DRC curriculum must enable Congolese people to establish peace, which is the current need for the country, by contributing to the development of the DRC army.

## III. LITERATURE REVIEW

### 3.1 Curriculum

Curriculum frames education. Sa'dullah (2023:410-411) says that "curriculum and education are inseparable, as it is well known that a curriculum guides education administration. Education cannot be carried out without a curriculum, and education goals will not be realized". This is to say that curriculum designers have to be aware of the real needs of the country so as to plan courses which bring the country to its self-defense and development. Sa'dullah (2023: 410) adds "a curriculum must be able to develop something new by development that occurs and the needs of society in the present and the future". Any country's problem has its solution if the education of this country is well framed by the curriculum. In the case of the Democratic Republic of the Congo, the curricula in different universities and colleges of the country should have prepared Congolese to find solutions to the problem of many external threats and internal conflicts.

### 3.2 Role of Government

A curriculum can be well designed or well implemented, but if it lacks government support, the results cannot be efficient. Nuryanto et. al. (2023:1218) assume that "the government is also expected to be responsible for ensuring education is relevant to the needs". The DRC government needs to support education by providing both professors and students with all the means needed, such as laboratories, workshops, etc. Furthermore, a government that wants to defend and develop its country is expected to build industries and factories where the students, who have completed their studies, can produce what the country needs. This means that the government has to fund education. Abdullah et. al. (2017:738) say that "the government spending on education is important to increase the number of skilled labour to fulfill labour requirements". For Aubakar et. al. (2020:78), "funding of education in a country with a well-organized and productive educational system is beyond payment of salary and purchasing of

educational materials. It includes, among others, development of school infrastructures: funding of teacher training and re-training programmes, provision of facilities and equipment such as laboratories, libraries, books, ICT facilities, etc. The DRC government has to fund education and research in all sectors of the country, mainly the military sector, for the defense of the country against external threats and internal conflicts.

### 3.3 Political Influence on Curriculum

The politics of a country is for the development of the country. The development of the country includes, among many, a powerful army. Therefore, the RDC politicians should converge their views on the protection of the country by supporting the national curriculum, which is designed for the development of the country. Politics plays an important role in the success of curriculum implementation. In the DRC, it is politicians who have power and who rule the country. They affect all sectors of the country, including education. Putri and Suhardi (2023: 4390) stipulate that "politics affects education resources such as teacher salaries, infrastructures to support learning activities, and teacher training". This is to say that the DRC politicians have to support education by providing universities and colleges with all the means for the good of the country.

### 3.4 Factors That Make A Country Powerful

Factors that make a country powerful and developed are useful education, a strong army, a strong economy, diplomacy, independent national justice, a high sanitary system, and sports.

#### 3.4.1. Useful Education

Useful education is different from 'education'. If education is not useful, the country cannot be powerful and developed. Useful education solves problems that the country faces. For useful education, Pal (2023: 10) says that "education is acknowledged as the most important tool for socioeconomic development in a country". Although there are kindergarten schools, primary schools, high or secondary schools, colleges, and universities in the Democratic Republic of the Congo, the country remains weak and poor. It is as if education in this country is not useful for the defense of the country. But, it is clear to notice that the problem is not with education, but with political leaders who do not provide enough means for research and practice. In former times, the DRC

engineers were able to produce explosives, small bombs, and other munitions in Likasi, one of the DRC cities. Unfortunately, political leaders do not provide these engineers with the means to do more. Professors and students are able to provide the country with solutions to its problems, but they cannot do anything because of the political culture of Congolese leaders, which is characterized by selfishness and a lack of patriotism. The budget for research is insufficient for researchers to conduct their investigations. Each year, term papers, memoirs, and theses are written, and useful solutions for the development of the country are suggested, but the political leaders do not even pay attention to the results of investigations and researchers' suggestions.

#### 3.4.2. Strong Army

Apart from war or fight strategies and techniques, firearms, munitions, and war machines make an army strong. Universities' responsibility is to find solutions to the problems of the country. Bouhajeb and the others (2018) say that "higher education is considered as an engine for development and growth in the knowledge society". This is to say that the faculty of polytechnics and sciences needs a curriculum that endows students with the ability to think of the production of firearms, munitions, armored vehicles, fighter planes, bombs, bombardiers, etc. It is possible to manufacture all these things, but the political governors do not provide researchers with the means. The curriculum has planned appropriate courses for that. This is to say that if the country lacks strong self-defense, it is not because Congolese students are not well trained, but it is because of the political culture of the DRC leaders who do not provide colleges and universities with appropriate means for research and manufacture. By means, I mean appropriate laboratories, workshops, and funds for research.

#### 3.4.3 High Economy

A country that does not produce its own wealth will remain poor, and it will always depend on the countries that have strong economies. The role of curriculum designers is to plan courses that enable students to enhance the economy of the country. The courses planned in the curriculum of the faculty of economics can enhance the DRC economy. The factor that destroys the DRC economy is the political culture of the DRC leaders. The economy of the country relies on the production, equitable distribution, consumption,

and conservation of wealth. In the DRC, on the one hand, wealth is not equitably distributed, and on the other hand, it is not conserved. This situation weakens and fragments the national economy of the country.

#### 3.4.4 Diplomacy

A balanced diplomacy is possible only between countries of the same level, strength, or category. If a poor country negotiates with a rich one, it is the rich country that has many advantages. Although the DRC can pretend to have good diplomacy, it is still a loser because the powerful countries still make a profit from the DRC's wealth. The best thing to do is to implement a good curriculum so as to enhance education, research, and the development of the country. Before using diplomacy, a country should strengthen its education, army, and economy.

#### 3.4.5 Independent National Justice

Any place where injustice is not punished cannot be developed because development is a product of justice. Naturally, the law should be above anyone and any institution. When people act above the law, anarchy takes place. As a consequence, authorities are not respected by their people. This situation cannot favor the development of the country.

#### 3.4.6 High Sanitary System

Sick people cannot do as it is required. Unfortunately, anyone can fall sick. The country needs to have its own sanitary system, but not a poor one. It is frequently noticed that many Congolese authorities go abroad for medical care. This means that there is no high sanitary system in the DRC. Therefore, it is time for the political leaders to understand that the DRC needs to enhance education by supporting an effective curriculum in the medical domain.

#### 3.4.7 Sports

Sport plays an important role in enhancing the economy of a country, but it requires an acceptable infrastructure. The DRC needs to design a curriculum that enhances sports. Furthermore, the country's government has to build sports infrastructure to increase its economy.

### IV. METHODOLOGY

In this section, the focus is on the courses

planned in the Electromechanics Department in the Democratic Republic of the Congo. Some of the skills that the Electromechanics Department wants to develop are design, manufacturing, and mechanical construction. To reach this aim, this department has planned many courses. But in this paper, only some courses are analyzed so as to ensure that the students in the Electromechanics Department can help the country strengthen its self-defense against exterior threats and interior conflicts by manufacturing, in collaboration with the DRC army, weapons, munitions, etc. In the following lines, each course is examined.

#### Manufacturing Technology

This course enables students to apply different metal removal, finishing, super finishing, and component production. The students attending this course are expected to be able to improve the quality, efficiency, and productivity of components. As far as the manufacture of weapons, munitions, etc. These students can help the country if the government provides them with enough means. As the DRC has enough ores that can be used in manufacturing items to strengthen the DRC army, this course in manufacturing technology is very important in the curriculum.

#### Fitting

Fitting aims at producing metal pieces. This course is also involved in manufacturing metal pieces. This means that on completion of this course, the students will be able to produce metal pieces. This implies that these students can support the army by manufacturing metal pieces used in war. If this course is given to students in equipped laboratories and workshops, these students can design and adapt metal pieces to contribute to support the DRC army and the development of the country.

#### Mechanical Construction

This course aims at constructing machinery. This course trains students in constructing machines. Machines are also used during war. That is, the students taking this course are capable of constructing machines used during war: ground vehicles, air vehicles, naval vessels, and weapon systems such as artillery, missiles, and small arms. To manufacture these machines, ores such as steel alloys, titanium, ceramics, synthetic fibers, aluminum alloys, magnesium, etc. All these ores exist in the Democratic Republic of the Congo.

Among the ground vehicles, battle tanks and armored vehicles can be cited. The ores which can be used to manufacture these ground vehicles are steel alloys, titanium alloys, ceramics, composite materials, synthetic fibers, etc. The air vehicles, such as the fighter planes, can be made with aluminum alloys, titanium, composite materials, etc. The naval vessels can be made of steel, aluminum alloys, etc. Missiles are manufactured with aluminum, steel, magnesium, titanium alloys, etc. Firearms or small arms are also made of aluminum, steel, titanium, etc.

### **Electronics and Electrical Measurement**

This course aims to set techniques of measuring electrical quantities in designing, testing, or maintaining electrical or electronic systems. This course contributes to manufacturing since it trains students in measuring with precision. The students taking this course seriously are able to contribute to the defense and development of the Democratic Republic of the Congo. This course is effective if the students take it as it is required and if it is taken in a well-equipped laboratory. This is to say that the government must provide these students with a well-equipped laboratory and workshop for practice, design, and manufacture.

### **Mechanical Manufacturing**

It aims at designing, assembling, manufacturing, etc. This course provides students with knowledge in studying the behavior of solid objects, analyzing the movement of fluid, motion of objects, energy, heat transfer, creating functional designs for mechanical systems and components, and various techniques for shaping, etc. This course enables students to contribute to the security and development of the country. What they need is the support of the government in order to use their knowledge for the good of the country.

### **Applied Mechanics**

It aims at designing and manufacturing different industrial devices. This course provides students with knowledge in the design of structures and machine elements. Applied mechanics in the curriculum is very important since the students taking it can design devices that can be used by the DRC army for the protection of the country.

### **Mechanical Production**

It aims at manufacturing pieces. This course enables students to create machines, tools,

systems, etc. This shows that the DRC students in the Electromechanics Department are able to contribute to the security and development of their country if they are well-trained and equipped.

### **Digital Control of Machines**

It aims at controlling the interaction with machines and other devices. The students taking this course study how to interact with different machines. This interaction facilitates autonomous actions between machines. This knowledge can help design and manufacture drones that are useful for the army.

### **Modern Electrical Engineering**

The modern electrical engineering course is about training students in designing, analyzing, implementing electrical systems, devices, and technologies, and maintaining electrical systems to solve practical problems.

### **Thermomechanics**

The course in thermomechanics enables students to study the behavior of bodies. That is, the students taking this course study the behavior of energy and matter in systems. With this knowledge, the students understand temperature, energy, heat, and how these elements change under different conditions.

## **V. DISCUSSION**

The Democratic Republic of the Congo is a big country. Its soil, underoil, flora, and fauna are rich enough. This wealth is envied by many other countries. This can be a permanent cause of war, external threats, and internal conflicts. Therefore, the Democratic Republic of the Congo must be prepared to defend itself. The DRC universities and colleges already have well-designed curricula. Students are taught to solve the problems of the country. The government has the responsibility to support the effectiveness of the implementation of these curricula. The Democratic Republic of the Congo should not rely only on diplomacy. Peace is not a result of diplomacy, but power. To be powerful requires powerful weapons, munitions, warplanes, warships, bombs, missiles, rockets, etc. The Democratic Republic of the Congo can manufacture all these items because it has the ores and materials which are required.

## VI. SUGGESTIONS

The DRC decision-makers are advised to endow universities and colleges with different laboratories and ateliers where students can think, experience, and design any means for the protection and defense of the country. The DRC's ores need to be exploited and transformed in the country to ensure military and economic independence. These are the facts that will lead the country to its security and peace. Diplomacy can be used in the sense that the DRC, as a part of the world, can collaborate with other countries. One should retain that diplomacy between powerful countries and weak countries is for the benefit of the powerful countries. If the Democratic Republic of the Congo keeps using diplomacy for its peace, it will be a battlefield. To avoid this disastrous situation, the DRC decision-makers must understand that the country's peace and development are in self-defense.

## VII. CONCLUSION

The war in the East of the Democratic Republic of the Congo led people to think about the effectiveness of curricula in the DRC universities and colleges, since the universities and colleges have to find solutions to the problems of the country. The analysis of some courses in the electromechanics curriculum has pointed out that the curriculum is well designed. If universities and colleges do not provide solutions that the country needs, it is because the government and political leaders do not support the effectiveness of the implementation of the curriculum. Considering the courses planned in the curriculum, the students are able to contribute to the defense and development of the DRC if the DRC decision-makers provide universities and colleges with appropriate equipment. For this reason, it has been suggested to the DRC decision-makers to offer to universities and colleges different types of laboratories and ateliers so as to help students think, experience, and design what is useful for the country. It has also been said that the country should not rely on diplomacy. It should first of all become powerful by manufacturing its own weapons, munitions, warplanes, warships, bombs, missiles, rockets, etc., because diplomacy between powerful countries and weak countries is in favor of powerful countries.

## VIII. REFERENCES

1. Abdullah, M.B. et al. (2017). Employment Generated by Government Spending on Education in "International Journal of Academic Research in Business and Social Sciences". Vol. 7, N°02, pp. 738-742
2. Adelayo, O.O. And A.A. Olusegun .(2022). The role of Curriculum in Fostering National Integration in the 1st Century in "International Journal of Education and Sustainable Development". Vol. 2, Issue 8, pp. 49-54
3. Aubakar, H. et al. (2020). Funding of Education in Nigeria: The Role of Government and Allied Stakeholders in "Annales of Technology Education Practitioners Association of Nigeria". Vol. 3. Issue 3, pp. 78-86
4. Ayeni, E.O. et. al. (2024). The Role of Government in the Implementation of Core Curriculum and Minimum Academic Standards (CCMAS) in Nigerian Universities in "Electronic Research Journal of Social Sciences and Humanities". Vol. 6, Issue II, pp. 65-77
5. Bouhajeb, M. et al. (2018). Higher Education and economic growth: the Importance of Innovation in "Atlantic Review of Economics". Vol. 01, N°\_, pp\_\_
6. Nuryanto, U.W. et. al. (2023). Optimizing Human Resources Management: Government's Crucial Role in Enhancing Education Resources in Indonesia in "Jurnal Pendidikan Islam". Vol. 12, N°04, pp. 1215-1227
7. Pal, L.C. (2023). Impact of Education on Economic Development in "Khazanah PendidikanIslam". Vol. 5, N° 01, pp. 10-19
8. Pangestu, F. And S. Sukardi. (2019). Evaluation of the Implementation of Workshop and Laboratory Management in Vocational High School in "Jurnal Pendidikan Vokasi". Vol. 9, Issue 2, pp. 172-184
9. Putri, A.H. And S. Suhardi. (2023). The Influence of the Political System on Education Curriculum Policy in Indonesia in "Jurnal Pendidikan". Vol. 15 N°04, pp. 4384-4392
10. Sa'dullah, A. (2023). The Importance of the Role of an Appropriate Curriculum in Education in "Proceedings ofthe 1st International Conference on Education, Society and Humanity". Vol. 01, N°01, pp. 409-414

# Index

## A

Alienation: 10, 23

Anointing: 10, 12, 13

Anthropology: 9

Anxiety: 9, 12

Asymmetry: 17, 18, 22, 23, 27

## B

Banquet: 7

Behaviorism: 9

Believers: 8, 11, 13

Belonging: 10

## C

Calvary: 13, 14

Capital: 10, 20, 21, 22, 24, 27

Christ: 5, 6, 7, 8, 9, 12, 13, 14

Covenantal: 6, 7, 9, 13

Culture: 6, 8, 9, 10

## D

Development: 17, 18, 22, 23, 25, 26, 27

Devotion: 13

Distribution: 25, 26, 27

## E

Employment: 22, 23, 27

Eschatology: 6, 13

Exegesis: 6, 7

Externalities: 22, 23

## F

Family: 5, 6, 8, 10, 11, 12, 13, 14

Formation: 6, 9, 10, 13

Fragmentation: 6, 9

## G

God: 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Gospel: 7, 8, 13, 14

Growth: 17, 18, 19, 20, 21, 22, 23, 24, 27

Guidance: 5, 10, 13

## H

Healing: 9, 13

Hebrew: 6, 7, 10

Hermeneutic: 5, 6, 13

Households: 6, 13

## I

Identity: 5, 8, 9, 13, 14

Immigration: 20, 24

Inclusion: 17, 23, 27

Inequality: 23, 25, 26, 27

Infrastructure: 17, 27

Investment: 17, 18, 20, 21, 22, 24, 27

## L

Labor: 22, 23, 24

Liturgy: 10

Longevity: 26

## M

Macronorth: 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27

Macrosouth: 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27

Megaprojects: 17, 24, 27

Migration: 20, 22, 23

Modernity: 5, 6, 8, 9, 10

## O

Orientation: 5, 10, 11, 13, 23

Orthodoxy: 5

## P

Pastoral: 6, 7, 12, 13

Population: 23, 24, 27

Protection: 5, 9, 12

Providence: 10

Psalm: 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Psychology: 9, 10

## R

Redemption: 10, 13, 14

Redemptive: 9, 13

Region: 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27

## S

Sabbath: 7, 11

Salvation: 13

Secularization: 5, 6, 7, 8, 13, 14



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