

Sustainability versus Reality

The Regional and Urban Dilemma of Development

Editor

Mirosława Czerny



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INTRODUCTION: SUSTAINABILITY VERSUS REALITY. THE REGIONAL AND URBAN DILEMMA OF DEVELOPMENT

Mirosława Czerny

The authors of the monograph return once again to the issue of regional and urban development against the challenges of new sustainability-oriented policies and strategies. The academic debate surrounding the subject is seemingly never-ending. With time, it has been taking on new forms and focusing on yet unresolved problems. This is because sustainability continues to pose a challenge for local and regional communities, and the paths to its achievement are often yet undefined and untreaded. Local contexts – comprising the interests of various political, economic, and social groups – clash with the just and honourable ideal of sustainability, often allowing only for its partial implementation or hampering it altogether.

The chapters by Polish, Spanish, and Latin American authors included in the present publication reflect the immense diversity of themes discussed under the umbrella of sustainability. Only a selected few are tackled here, deemed the most interesting in the context of current academic discussions and urban planning strategies.

Part I concerns the domain of the city. The text “When the idea and the essence do not tally... Some reflections on sustainable (urban) development” by *Mikołaj Madurowicz* offers a critical analysis of the concept of sustainability and the methods of its implementation. The following article, titled “The theory of sustainable development in the context of the urban and architectural heritage of historical city squares in Europe” constitutes an introduction to the debate on sustainability from the perspective of the development of cities. The author, *Marta Szczepańska*, discusses dilemmas of urban planners who are forced to negotiate between the need to preserve objects forming part of urbanistic and architectural heritage and the implementation of sustainability-oriented solutions. *Aleksandra Wojtaszek* has contributed a chapter titled “Political changes and foreign influences: urban planning of Baghdad over decades”. It concerns the impact of political events on the spatial development of cities. Over the last several decades, Iraqi authorities have invited various groups of urban planners (some hailing from Poland) to work together on drawing up municipal land use plans. After the end of the war, Iraq is

working on its own national development strategy aimed at introducing proper functional and urban organisation into the city. A discussion of urban development from the perspective of historically influenced social segregation can be found in the article “San Cristóbal de Las Casas – policy-induced spatial segregation and ethnic differentiation” by *Miroslawa Czerny*. San Cristóbal de Las Casas is a city in Mexico, situated close to the Guatemalan border. It lies in a region largely dominated by the local Indigenous population – the Mayas. For centuries, they have been socially and economically marginalised, which finds its reflection in the organisation of space. Due to political unrest prevailing in the region for nearly half a century, the city has become home to many refugees from combat zones and victims of repressions against the Indigenous population. In the chapter titled “Urban street markets: urban policies, conviviality, and development in Curitiba and Warsaw”, *Schirlei Mari Freder* and *Mario Prokopiuk* focus on the role of trade in the streets of Curitiba and Warsaw. It is a comparative study shedding light on the differences in land use planning between the two cities, resulting mainly from cultural differences. Access of cities and regions to water is currently one of the major topics of discussion in the realm of sustainable development and climate change all around the world. *Bruna Branchi*, *Lucas Brambila*, *Orandi Mina Falsarella*, and *Duarcides Ferreira Mariosa* tackle the issue of water supply in their article titled “Water as the key link between economic development and sustainability”. The authors focus their research on investigating water supply systems in one of the largest metropolitan areas in São Paulo state.

Part II of the present volume is devoted to various issues surrounding the mechanics of local economies and the relationship between the local and the global. In the chapter titled “Encounters and tensions between the countryside and the city. Insights from El Tambo, Nariño, Colombia”, *Diana Paola Diaz Criollo* and *Guadalupe Margarita González Hernández* discuss the process of transforming family farms in Colombia into product-oriented enterprises. The period since 2016 (when peace accords were signed in Colombia) has seen increasing commercialisation of Hass avocado monoculture and growth of rural tourism. The transformation of traditional rural areas and their inclusion into the globalised agricultural market and tourism has brought hope to the Nariño region but also generated threats, especially for the natural environment. In the chapter “Sustainable models of territorial development: from local development to rural development in the case of Spain”, *Eloy Gomez-Pellón* discusses regional development plans in Spain. The models of regional development devised in the recent decades take a holistic approach to socio-economic relations and modernisation of rural areas, which serves as a good example of solutions integrating European planning initiatives on various levels. Another discussion point within the realm of regional literature, and a relatively new one, are issues connected to Integrative Circular Transition. They are the focus of *Małgorzata Pusz*’s chapter titled “Ethical dimension of rebound effects in integrative circular transition: insights from the Fourth

Sector in Chile”. The author pays particular attention to the social and ethical aspects of this strategy. Socio-temporal relations are a key factor for the successful implementation of this model. Tourism is undoubtedly becoming a more and more significant driver for regional development. Various tourism models make use of the existing features of the local environment to attract investors and visitors. *Wioletta Kałamucka* and *Krzysztof Kałamucki* discuss an eastern Polish region’s potential for growing its tourism base in the chapter titled “Strengthening tourism as an element of sustainable development of peripheral areas of eastern Poland. The example of the municipality of Janów Lubelski”. Part II closes with a chapter by *Ciro Alfonso Serna Mendoza*, *Diana Sofía Serna Giraldo*, and *Américo Guevara Perez* titled “Bio-commerce in Latin America”. Latin American countries have a large share in the global trade in agricultural products and are developing their capacities in the field of producing organic goods. Colombia, being one of the largest coffee exporters in the world, is able to change demand in the international market by supplying growing volumes of coffee produced by ecological farms. The same applies to other agricultural products. However, the increasing space occupied by crops poses a threat to Colombian protected areas.

Part III of the volume comprises texts discussing socio-political and educational issues in the context of sustainable development. In Colombia, social development has become a challenge for the new government. The authorities, headed by President Petro, are taking action to improve the quality of the country’s social capital. These initiatives consist mainly in supporting the marginalised sectors of Colombian society. This issue is the focus of the chapter “Social development and social movements” by *Ciro Alfonso Serna Mendoza*, *Diana Sofía Serna Giraldo*, *Atilio Rodolfo Buendía Giribaldi*, and *Shirley Emperatriz Chilet Cama*. On their part, *Agnieszka Olter-Castillo* and *Katarzyna Górka* discuss internal population movements in Peru, caused primarily by extreme weather phenomena resulting from climate change, in their chapter titled “Environmental factors and internal migrations in Peru: exploring adaptation strategies, human agency, and policy implications”. *Atilio Rodolfo Buendía Giribaldi*, *Celín Pérez Nájera*, and *Shirley Emperatriz Chilet Cama* have penned a chapter titled “Challenges of exponential development in Latin America through the lens of an education model for a sustainable future with social responsibility”, in which they tackle the issue of pro-ecological education and promotion of sustainability on the example of Cuba. Part III concludes with a chapter by *Ciro Alfonso Serna Mendoza*, *Diana Sofía Serna Giraldo*, *Flor Delicia Heredia Llatas*, and *Emma Verónica Ramos Farroñán*. Titled “Social responsibility and purposes of education in liquid modernity”, it offers a reflection on university education and its role in today’s world. The authors base their argument on Z. Bauman’s ideas and analyse the attributes of Latin American society on its way to modernity.

PART I
CITY

WHEN THE IDEA AND THE ESSENCE DO NOT TALLY... SOME REFLECTIONS ON SUSTAINABLE (URBAN) DEVELOPMENT

Mikołaj Madurowicz¹

1. The first reflection

Difference is one of the constitutive facets of the city and its natural principle of existence. The range of meanings associated with this difference is vast, extending from the very reasons for creating spaces of intensified encounter and multidimensional exchange to their intrinsic – and sometimes even imperative – desire to include all forms of otherness. The city emerged, in relation to previous historical contexts, as a certain anomaly or innovation in the organisation of collective life. At the same time, it thrives most effectively on structural disproportion, the uneven distribution of capital, the dynamics of competition, the asynchronous interactions between its components, the heterogeneity of its substance, and both quantitative and qualitative imbalances. Any attempt to balance the city in its broadest sense often resembles a mission to reach an asymptote, a task that borders on the impossible.

For centuries, attempts have been made to impose *interpretative veils* (like filters in a photographic lens) on the urban social and ethnic heterogeneity, the disparities in wealth, tradition, origin, and education, cultural and political diversity, the many discrepancies in personal and institutional competences – in short, on the multiplicity of statuses and functions manifesting in the urban environment, along with its inherent contrasts. Through these efforts, we aim to homogenise, mould, unify, and reduce to a common denominator the overly complex reality, accentuating its similarities, identifying formal and actual correspondences between places, spheres, and domains, while levelling out their separateness. This is where theories, models, and visions that universalise what is primarily different and separate come to the rescue.

Moreover, by highlighting the similarities and possibilities of aligning or even formally coordinating the status, importance, and dynamics of urban events, processes, phenomena, and domains – often at the expense of their

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idiomaticity and individual specificity – we find a set of means and measures in the epistemological (cognitive) toolbox designed to “correct” the urbanised centre. We want to immediately turn conceptualisation into an operationalisation, or even an application! As a result, an idea, theory, concept, or paradigm may appear as an opportunity – not just to rebuild the world from scratch, but at least to modify its current state. As Italo Calvino (2024, p. 322) suggests in his short but insightful essay *The Archaeologist’s Gaze*:

Dissatisfied with our increasingly uninhabitable world and convinced that the tools for changing it must go hand in hand with those for understanding it, we welcome every opportunity to rethink something from the beginning. It is impossible to move forward without risking something previously thought of as a destination, a solid gain, or a certainty [own translation].

Moreover, if one assumes that contemporary interpretations of reality and their practical implications constitute the optimal deposit for future generations, then an *error of ahistoricism* is committed – a mistake similar to projecting the optics of the present onto past centuries, assuming that today’s explanatory models will allow us to fully grasp past situations. Disregarding the historical context when reflecting upon specific, spatio-temporally situated social, economic, or political phenomena can distort their meaning, rendering them unrecognisable. The arbitrary projection of priorities onto the past and/or future – no matter how well-supported by centuries of observational data – invariably imposes a particular mode of reading the present. When we force a specific and “currently” prevailing political system, spatial development model, aesthetic canon, or set of ethical values as an analytical lens and, to some extent, as an ontological (existential) guideline on the “before” (backwards) / “after” (forwards), we implicitly assert/anticipate that both human beings and their habitat have not changed / will not change. And yet, following the argument of Krzysztof Pomian (2009, p. 13),

if we find a particular view or behaviour bizarre, irrational, or absurd, before we conclude that it is indeed so, we should examine the interpretative categories we use and, if necessary, replace them with those that have historical justification and, at the same time, reveal the rationality or reasonableness of the behaviour or view in question and allow us to understand why it seems bizarre, irrational, or absurd [own translation].

Therefore, while any social, economic, or political prognoses, environmental, civilisational, or cultural forecasting, modelling, prospecting, or foresight – both locally and globally – have an illustrative value and align with the noble philosophy of far-sightedness and precaution, to assume that the *hierarchy of priorities* will remain unchanged is, to put it mildly, careless. Given the cognitive and pragmatic principle *lex retro non agit*, the actual implementation of solutions hypothetically serving both the present and the future equally

seems like inviting oneself to a table at which future generations are to take their seats and imposing an honorary place for oneself.

In conclusion, when an idea intended not only to explain the world but, above all, to change it (implicitly for the better) impoverishes its current complexity and aspires to furnish both imagination and the reality yet to come (*sic!*) – even in the name of preserving for tomorrow what is most precious today – it can resemble a form of *diachronic conceptual colonialism*, driven by the hope of realising that very idea.

2. The second reflection

People have always told a certain explanatory story, a narrative to legitimise history, with mythology, religion, law, politics, art, and science serving as such frameworks. From time immemorial, through explanatory discourse, ideas have been employed to elevate reality. Myths, gospels, constitutions, ideologies, artistic programmes, and cognitive concepts have all claimed the right to exist and apply, i.e. to regulate the life of a given collective. One of the scientific narratives is the story of *sustainable development* (including urban development), a conceptual category approached in varied formal ways. As Lidia Mierzejewska (2009, p. 24) suggests, sustainable development is understood in different studies as a paradigm, idea, concept, model, strategy, policy, principle, or action objective. Other sources² further qualify it as a theory, postulate, vision, directive, ideology, programme of action, phenomenon, source of innovation, wishful thinking, practical assumption, panacea, task, result, measure, or criterion, among others. Clearly, the formal and, in a way, conceptual and semantic status of sustainable development operates in plurality and often polarises the concept itself.

Let us have a look at a selection of interpretations of sustainable development which, depending on the field of intellectual or practical activity, obviously take on a different tenor, yet they share a similar definitional core. The concept of sustainable development

constitutes a proposal for a qualitatively new form of conscious, responsible individual and social life, developing along with the social and natural environment and taking into account ecological constraints and social expectations (Kožuch et al., 2023, p. 8) [own translation].

² See Benites & Simões, 2021; Błaszczak, 2023; Bocian, 2008; Bryx, 2023; Croese et al., 2020; Czerny, 2016; Filar & Kubicki, 2012; Guziejewska, 2015; Guzman, 2020; Janikowski & Krzysztofek, 2009; Komasi et al., 2023; Kożuch et al., 2023; Mierzejewska, 2015; Neto Tomaz, 2021; Niemets et al., 2021; Parysek, 2015; Pęski, 1999; Rzeńca, 2016; Sadowski & Łepko, 2017; Sekuła et al., 2022; Słodczyk & Rajchel, 2008; Son et al., 2023; Szelągowska, 2023a, 2023b; Truong, 2020; Ziemblicki, 2016.

The fundamental intention of sustainable development, thus understood, is

sustainable improvement in the quality of life of a region's inhabitants in tangible and intangible terms, without deterioration of the environment, while preserving biodiversity and cultural heritage (Kruk, 2011, p. 228) [own translation].

Before a brief exegesis of the interpretation of sustainable development, let us add that it is said to aim at

meeting the earthly needs of societies, assuming that future generations will be able to meet them in the same way. Sustainable and durable development encompasses three areas: economy, society, and environment (Błaszak, 2023, p. 9) [own translation].

Firstly, this “qualitatively new form of responsible living”, involving efforts to spatially balance strategic means versus costs, possibilities versus intentions, and conditions versus undertakings in the social, economic, and environmental realms, echoes earlier narratives about organising human habitats. For instance, one might reference the ideas of Robert Owen or Ebenezer Howard (see Jałowiecki & Szczepański, 2002, pp. 130–133). Secondly, the interpretations of sustainable development found in these and other sources³ rest on an implicit assumption that in relation to the temporal register of “future generations”, neither human needs (individual or collective) will change,⁴ nor will the ways of fulfilling them transform, nor will the category of “responsibility” undergo semantic dynamics and retain its present semantic status. Thirdly, the term “durability”, which automatically appears as allegedly synonymous or organically relevant to the attribute of sustainability, redirects attention to a different aspect of development. This is similar to what occurs with other terms supposedly synonymous with the concept of sustainability, such as “integrated”, “self-sustaining”, “continuous”, “long-term”, “coherent”, “efficient”, “stable”, or “ecological”. Yet, none of these characteristics is synonymous with sustainability itself. Nonetheless, discourse on the topic frequently posits an indispensable semantic link between them in various configurations. Fourthly, expressions like “improvement in the quality of life”, “non-deterioration of the environment”, “preservation of biodiversity and cultural heritage”, and “ecological limits” – to use the phrasing from the quotations above – may have similar overtones in almost all interpretations of sustainable development across institutional, applied, and scientific literature, but they do not,

³ Cf. Lewandowska, & Szymańska, 2021; Mayer & Nguyen Long, 2021; Bambó Naya et al., 2023; Nowakowska, 2016; Przygodzki, 2016; Zaniewska et al., 2008; Zhong et al., 2023.

⁴ Although the original phrasing of the so-called Brundtland Report, which will be referenced later, includes the following definition of sustainable development: “[...] development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (emphasis added – M.M.); see UN Secretary General & World Commission, 1987.

from a common-sense or logical perspective, equate to development *per se*. To “improve” implies catching up or addressing deficiencies; to “not deteriorate” and to “preserve” imply maintaining the *status quo*; and to “take constraints into account” is to set conditions. Notably, the recurring idea of sustainable development typically assumes the complementarity – let it be – of social and economic development and, for the most part, the protection (*sic!*) of the natural environment. Regarding the latter, development *ex definitione* is rarely mentioned (as it is in the case of other fields), which translates into the status of nature as merely a context, a surrounding, and therefore a margin, since the *spiritus movens* or *modus operandi* of postulatively responsible actions remains, ultimately, only the human being. Of course, in the concerned rhetorical message about sustainable development, the natural environment occupies a central place. However, this does not give the lie to the fact that it often remains a fig leaf in relation to the actions actually undertaken. Consequently, fifthly, sustainable development for the humanity does not necessarily equate to sustainable development for the Earth (cf. Chakrabarty, 2018, 2023). Sixthly, in light of the above, the very division of the concept of sustainable development into areas, sectors, pillars, and fields – following the basic scheme into economic, social, institutional, and natural (environmental), sometimes combined with spatial, although at other times the latter is singled out as a separate category (*sic!*) – seems questionable. Seventhly, it is rarely acknowledged in the academic literature on the subject and almost never in normative documents or materials embedded in political discourse that development always comes at a cost to something.

To sum up, the corrective narrative about reality surrounding sustainable development not only fails to provide formal clarity but also generates significant doubts regarding its substantive interpretation. Referring back to the first reflection, I must emphasise my scepticism towards projecting the concept of sustainable development into the future and assuming that such a legacy – noble as it may seem in our present understanding – will be unreservedly valued by future generations.

3. The third reflection

Humans have a natural tendency to *project their humanity* (understood as a characteristic) onto the surrounding reality. Vladimir N. Toporov (Toporow, 2003) insightfully explored this inclination in his work *Space and Text*. We want to see the attributes that describe us in the world, or rather, we simply cannot find any other language to portray a chosen fragment of the universe. For this reason, we speak of mountains having “faces” and “foothills”, describe cities as “intelligent”, and define development (in Polish) as “balanced”, potentially understood as “well-balanced”. Polish dictionaries of synonyms suggest that the adjective “balanced”, anthropogenic in origin, carries meanings such as

stable, reserved, restrained, controlled, moderate, agreeable, non-conflictual, or even good-neighbourly (Dąbrówka et al., 1993, p. 123).⁵ It is always useful to consider a term's antonyms to verify whether transferring it from a strictly human domain to another respects its full semantic context, including opposing meanings. For example, "unbalanced" is defined in the same dictionary as impetuous, bloodthirsty, uncontrollable, impulsive, explosive, or even rowdy (Dąbrówka et al., 1993, p. 155). Examining studies on sustainable development published over the past decade, it is easy to conclude that the *etymological reversal of the term* has been conveniently overlooked during its implementation. After all, no one speaks of "impetuous development", "aggressive development", or "rowdy development", even though terms like "impulsive development" and "explosive development" have already been recognised in scientific discourse. However, these are not considered opposites of our "*balanced / sustainable development*". Moreover, the choice from among the positive spectrum of meanings associated with the term has indirectly leaned towards "compatibility" and "good-neighbourliness" rather than similar alternatives. Nevertheless, it also appears that restraint, temperance, or moderation – though omitted from the substantive register – manifest themselves glaringly through their opposites (*sic!*) when we recognise the operational scope of the appropriation of various cognitive fields by the concept of sustainable development (through the efforts of researchers and practitioners, of course).

A quick look at any scientific database or search engine (e.g. Google Scholar) demonstrates that sustainable development today encompasses *nearly everything*. Studies exist on sustainable development in relation to local communities, ageing populations, children and schoolchildren, housing estates and complexes, forests, mountainous areas, transboundary biosphere reserves, the Baltic Sea region, organisations, transport, agriculture, forestry, family businesses, rural tourism, rural areas, personnel training, local (or municipal) government units, the knowledge economy, and more. It extends to fields such as education (including early childhood education), building construction, broadly understood management, sewage sludge management, European integration, energy and climate policy, and even "civilisational revolution"... This "wolfish appetite" for the concept of sustainable development is driven by the imperial (intellectual) aspirations of researchers and politicians; however, it diverges sharply from the ideals of restraint, temperance, or moderation and does little to clarify the concept itself. Thus, one might ask whether a source

⁵ The Polish notion of *rozwój zrównoważony* clearly holds a central place in these considerations, as this is the most common translation of "sustainable development". The conceptual reflections presented in this part of the article should, therefore, be confined exclusively to Polish terminological interpretations. Notably, these interpretations often appear in the plural to capture the diverse semantic dimensions of the English original, as well as its institutional formalisation through international documents.

definition of sustainable development exists that can objectively resolve the numerous cognitive ambiguities listed above (and many more omitted) – or whether the definition must be reinterpreted with each new application.

In Polish science itself, sustainable development is examined in various contexts, such as its relationship with natural and cultural capital as developmental resources and technology as its cultural factor (Janikowski & Krzysztofek, 2009), strengthening urban ecosystems and balancing the city's spatial systems (Pęski, 1999), environmental management systems based on ISO 14000 series standards (Słodczyk & Rajchel, 2008), public housing policies, funding diversification, public health and health expenditures, urban revitalisation, EU funds (Guziejewska, 2015), valuation of public space, cultural heritage management, quality and environmental management standards, the global crisis, international legislation (Uniwersytet Ekonomiczny we Wrocławiu, 2016), sustainable transport development within the Polish economy and international agreements (Lorek, 2008), transport system efficiency, pedestrian- and cyclist-friendly cities, and sustainable urban transport (Hebel, 2008; Nowakowska, 2016), sustainable governance, urban public service quality (Przygodzki, 2016), climate policy, nature conservation, building construction quality, social inequalities, pro-environmental behaviour, theological reflection, papal encyclicals, and religious and ethical aspects (Sadowski & Łepko, 2017), the evolution of functional structure of medium-sized cities (Dembicka-Niemiec, 2017), social participation (including civic budgets), urban governance, economic growth (Błaszak, 2023), social responsibility, waste management, sustainable investment, energy efficiency of technical progress, renewable energy sources (Kozuch et al., 2023), and the idea of spatial, social, and economic inclusiveness in the city (Gross-Gołacka, 2023).

The above panorama of issues does not necessarily reinforce the *legitimacy* of the “sustainable development” term, even if one accepts its principles (pillars) as unchanging and independent of problem-specific particularities. These pillars include, for instance, ecological sustainability (which arguably does not always translate across all fields), economic development (often emphasised at the expense of other aspects, as evidenced by the measures and/or indicators used to estimate and monitor initiatives assumed to be developmental, thereby prioritising quantitative instrumentalisation over qualitative considerations, ultimately favouring a focus on measurable growth⁶), or social justice between generations and within each generation (cf. Bocian, 2008, p. 281).

We leave aside the confusion arising from the frequent interchangeable use in discourse of terms belonging to different orders. Examples of this include pairs of concepts such as “sustainable urban development versus sustainable city” (the former referring to processuality, the latter to status)

⁶ Cf. Zaniewska et al., 2008, pp. 67–75; Mierzejewska, 2009, pp. 163–164; Malinowska & Kurkowska, 2018, pp. 363–382; Augustyn, 2020, pp. 70–71; Visvizi & Pérez del Hoyo, 2021; Błaszak, 2023.

and “sustainable city versus sustainable transport” (the former representing a higher-order category, the latter a lower-order one).

The idea of sustainable development, along with the conceptualisations and operationalisations derived from it, has also fairly early on become subject to other forms of *criticism*. Let us quote extensively from an elucidative study of this issue by Lidia Mierzejewska (2009, p. 19) (Table 1).

Table 1. Criticism of sustainable development.

Entity	Criticism of sustainable development
Advocates of “deep ecology” (the so-called green approach)	1) A technocratic approach to managing environmental resources on a global scale. 2) A business-oriented approach. 3) No distinction between sustainable development and the previous development model. 4) Too little attention paid to the activities of corporations promoting unsustainable business practices. 5) The very concept of “sustainable” development. 6) A terminological contradiction that can be used as a cover for continued overexploitation.
Supporters of economic growth	1) Excessive caution regarding the future. 2) Underestimating the role of technological progress. 3) Sacrificing economic growth due to excessive concern for the natural environment. 4) No clear definition of what needs to be balanced. 5) The ambiguity of the concept of sustainable development, which places it on par with other “contentious issues” such as freedom or justice.

Source: Mierzejewska, 2009, p. 19

While criticisms of the concept of sustainable development can be raised from perspectives beyond those listed above (e.g. social or conservationist viewpoints), more intense objections likely arise from the ways in which the idea is implemented. As previously noted, operating with a single idea is challenging due to the conceptual stratification, problematic dispersion, and semantic ambiguity inherent to sustainable development. The vaguely hinted-at and general intangibles in its definition – even if we refer directly to the words of Gro Harlem Brundtland, Chair of the UN World Commission on Environment and Development, in the 1987 report *Our Common Future*, and recall the original wording of the key postulate, especially the part concerning the *needs of future generations* (which, as mentioned earlier, is unfortunately not used in the conceptualisations and operationalisations primarily based on this report) – also do not provide ready-made solutions. These, in turn, had to be developed, taking the form of assumptions, targets, norms, and metrics. The resulting administrative, political, technical, and financial instruments were incorporated into the national legislations of countries committed to the core

idea. The scientific community was tasked with developing metrics and methods of verification, while the political and economic spheres were responsible for optimising and implementing the vision outlined in the report mentioned and subsequent documents.

4. The fourth reflection

The *institutionalisation* of the idea of sustainable development has its own history – sometimes appearing in it as the main protagonist, at other times as only a spear carrier. Let us briefly review a selection of international documents with the status of binding declarations, which obligate the states ratifying them to implement their directives.

The early signs of a philosophy concerned with the Earth's environment (including humanity but not yet cities) can be traced to the 1969 appeal by UN Secretary-General U Thant, entitled *The problems of human environment* (criticising, among other issues, the destruction of arable land, the chaotic growth of cities, the destruction of plant and animal life forms, and environmental pollution) (Zaniewska et al., 2008, pp. 11–12). Another precursor was UNESCO's Man and the Biosphere (M&B) Programme, initiated in 1971. Initially, the programme focused on conserving (preserving) unspoilt nature and establishing an international Network of Biosphere Reserves (Rzeńca, 2016, p. 52). Over time, however, it evolved to emphasise the integration of local communities into protected areas.

As Marek Bryx (2023, p. 47) notes, “the first seriously and widely considered warning to the world suggesting the need for sustainable development was the Club of Rome's 1972 report entitled *The Limits to Growth*. In three scenarios for global economic development, the authors demonstrated that maintaining current development parameters would exhaust the planet's natural resources within 100 years” (own translation; see also Błaszak, 2023, p. 24). In the same year, the Stockholm Conference on the Human Environment and the resulting Stockholm Declaration led to the establishment of the United Nations Environment Programme (UNEP). In 1977, the United Nations Human Settlements Agenda (UN-Habitat, later elevated to the status of a programme) was established, preceded by a conference and resulting in two subsequent conferences that developed recommendations regarding, among other things, land use as a limited resource and urbanisation control. These conferences were held in Vancouver in 1976 (Habitat I), Istanbul in 1996 (Habitat II, where the UN's global plan of action on housing was adopted), and Quito in 2016 (Habitat III, where principles of sustainable urbanisation were developed, emphasising city compactness, the right to the city, and the smart city model) (Bryx, 2023, p. 48; Szelałowska, 2023b, p. 23).

The 1970s also witnessed the crystallisation of New Urbanism – a movement advocating renewal in architecture and urban planning and putting

forward a set of activities focused on returning to a “human-scale” city. Many of the postulates articulated by representatives of this movement resonated with the later principles outlined in the documents mentioned below, and sustainable development, understood as the use of ecological solutions, became one of the explicitly stated goals (see Szelałowska, 2023a, pp. 48–49).

In 1983, the UN established the Commission on Environment and Development, which formulated the concept of sustainable development and published its principles in 1987 in the *Report of the World Commission on Environment and Development* (commonly known as the Brundtland Report) under the title *Our Common Future*, including catchy slogans such as “think globally, act locally” and “we did not inherit the Earth from our fathers; we borrowed it from our grandchildren” (UN Secretary General & World Commission, 1987). In 1992, the UN Earth Summit in Rio de Janeiro brought together representatives from 172 governments. The summit resulted in two conventions on climate change and biodiversity preservation, the *Rio Declaration on Environment and Development* (commonly known as the Rio Protocol), a *Statement of Principles for the Sustainable Management of Forests*, and Agenda 21 – an action plan for sustainable development. The next Earth Summit (II), held in Johannesburg in 2002, known as Rio+10, was organised as the World Summit of Sustainable Development, followed ten years later by another Earth Summit (III), known as Rio+20, during which sustainable urban development was a key topic of lively discussion.⁷ The essence of the concept of a sustainable city (somewhat as a result of the sustainable development of a city) is, of course, rooted in the idea of sustainable development. As Anna Wojewnik-Filipkowska (2023, p. 145) argues, it resonates across various fields and activities,

for example, in the form of planning development in line with the compact city concept, urban transportation, a circular economy in waste management, or obtaining energy from renewable sources. Sustainable development involves maximising the net benefits of economic development, while protecting and ensuring the regeneration of the utility and quality of natural resources over the long term; it is development that respects the principles of intra-generational and intergenerational equity [own translation].⁸

Since the late 1980s and early 1990s, more and more people have been talking about a new paradigm of development, shortly referred to as sustainable development, which contains three (or sometimes more) so-called pillars (or principles), i.e. sustainable (in the sense of: self-sustaining) development, durable development, and balanced development (cf. Błaszak, 2023, pp. 27–28).

⁷ Cf., for example, Pęski, 1999, p. 31; Zaniewska et al., 2008, pp. 9–10, 53; Janikowski & Krzysztofek, 2009, p. 25; Mierzejewska, 2009, p. 21; Sekuła et al., 2022, pp. 47–49; Bryx, 2023, p. 49; Szelałowska, 2023b, p. 24.

⁸ Cf. Pęski, 1999, pp. 38, 133–134; Kupiec, 2008; Janikowski & Krzysztofek, 2009, p. 176; Mierzejewska, 2009, pp. 77, 115–117; Su & Fan, 2023.

In 1992, the Standing Conference of Local and Regional Authorities of the Council of Europe adopted a declaration entitled the *Urban Charter*, covering, among other things, the equal rights of all urban communities to employment, safety, a healthy environment, access to leisure areas, and respect for cultural heritage, while calling on local authorities to foster economic development and encourage social participation (cf. Rzeńca, 2016, p. 54; Augustyn, 2020, p. 39). Two years later, the *Charter of European Cities and Towns Towards Sustainability* (also called the Aalborg Charter) was signed at the first European Conference on Sustainable Cities and Towns in Aalborg, Denmark. This document, in turn, advocated for a sustainable economy, environment, and social justice through the integration of actions aimed at protecting natural capital, developing public transportation (including environmentally friendly options), energy saving, and urban regeneration (cf. Rzeńca, 2016, p. 54; Augustyn, 2020, p. 39). In both of the aforementioned documents, the guidelines for sustainable urban development frequently use terms such as “responsibility”, “efficiency”, “balance”, and “harmonisation”.

The idea of sustainable development was also normatively (legislatively) instrumentalised in the European Union’s policy document ratified in Potsdam in 1999, titled *European Spatial Development Perspective: Towards Balanced and Sustainable Development of the Territory of the European Union*. This was followed by the New Athens Charter adopted in 2003 by the European Council of Spatial Planners, which proposed the vision of the twenty-first-century city as socially, economically, and ecologically coherent. In 2010, the Toledo Declaration, a derivative of the *Europe 2020 Strategy* (calling for smart growth, sustainable development, and inclusive growth), emphasised that cities should develop according to principles of sustainability, cohesion, integration, and energy efficiency, and that an integrated urban development strategy should become a key tool in development policy, aiming to ensure an adequate standard of living for inhabitants.⁹ While these documents primarily focus on urbanised areas, many provisions apply beyond cities. However, they largely address existing shortcomings and outline progressive measures for the near future. The time scale expressed in the general rhetoric surrounding the idea of sustainable development (“future generations” – in the plural!) appears to be shortened within the temporal horizon assumed in specific normative frameworks (indicating end dates). Moreover, it is trimmed even further in the process of operationalising the guidelines¹⁰ and at the stage of implementing

⁹ See Rzeńca, 2016, p. 54; Augustyn, 2020, pp. 39–40; Sekuła et al., 2022, p. 51; Bryx, 2023, p. 50; Szelańska, 2023b, p. 25.

¹⁰ Among others, while examining the assumptions of the concept of sustainable development through: pillars (ecological, social, and economic), principles (5xP: people, planet, prosperity, peace, and partnership derived from Agenda 2030), capitals (natural, human, social, and economic), orders (ecological, socio-demographic, institutional-political, economic, and spatial) (see Sekuła et al., 2022, pp. 60–61; cf. Jałowiecki & Szczepański, 2002, pp. 361–368; Rzeńca, 2016, p. 57), criteria (social, economic, technical,

standards (ISO), measures, or indicators for monitoring development (which, by necessity, rely on current data and cautious forecasts).¹¹

A decade earlier, at the UN Summit in New York in 2000, leaders from 189 countries adopted the Millennium Development Goals (MDGs) in the Millennium Declaration. These goals included eradicating poverty and hunger, ensuring universal primary education, promoting gender equality and women's social advancement, reducing child disease and mortality rates, improving maternal health care, adopting sustainable resource management methods, and fostering a global consensus for development (see Augustyn, 2020, pp. 28–29; Sekuła et al., 2022, pp. 50–51). Once again, the tone of the goals formulated as ostensibly developmental seems to be, above all, compensatory in nature. At a subsequent international meeting in 2015 under the aegis of the United Nations, the *2030 Agenda for Sustainable Development* (commonly referred to as Agenda 2030) was signed in New York. Replacing the eight MDGs, it introduced 17 Sustainable Development Goals (SDGs) accompanied by 169 targets, specifying joint global actions. These new goals retained previous priorities while adding commitments such as ensuring healthy lives and well-being for all, sustainably managing water resources, securing stable and affordable energy, promoting decent work for all, reducing inequalities, fostering sustainable cities and human settlements (point 34 of Agenda 2030, notably Target 11), encouraging sustainable consumption and production patterns, combating climate change, protecting oceans, seas, and terrestrial ecosystems, and promoting peaceful and inclusive societies.¹² And yet again, the narrative of the mentioned normative frameworks is dominated by a compensatory tone and an unspoken intention of giving reparation for the shortcomings of the past (and present) reality, accompanied by only an implicit concern for future generations.

Other documents directly or indirectly addressing the issue of sustainable development (including cities), especially in the European context, were the Lisbon Strategy and the Gothenburg Strategy (both from 2000 and covering the period 2000–2010) (see Sekuła et al., 2022, p. 51), the Leipzig Charter (2007) (see Filar & Kubicki, 2012, p. 16), and later the European Green Deal (2019) (see Sekuła et al., 2022, pp. 67–84). Globally, influential texts include the interwar Athens Charter (1933) and the Turin Declaration of the International Union of Architects (2008) (see Janikowski & Krzysztofek, 2009, pp. 21–24).

spatial-architectural, and environmental), having characteristics of complex index measures (see Zaniewska et al., 2008, pp. 61–88, 90), then balances (natural, social, economic, and spatial) (see Mierzejewska, 2009, pp. 147–148), or objectives (ecological, economic, social, and psychological) (see Augustyn, 2020, pp. 37–38).

¹¹ See Zaniewska et al., 2008, pp. 93–95; Mierzejewska, 2009, pp. 163–164; Malinowska & Kurkowska, 2018, pp. 368–371; Augustyn, 2020, pp. 70–77; Sekuła et al., 2022, s. 62–66.

¹² See Augustyn, 2020, pp. 32–33; Sekuła et al., 2022, pp. 51–60; Błaszak, 2023, pp. 25–26, 40–42; Bryx, 2023, pp. 50–51; Szelągowska, 2023b, pp. 26–29.

In summary, the idea of sustainable development has been clothed in the guise of normative acts, its dimensions and aspects meticulously outlined, and measures and indicators developed. In a word, not only has the scope of its realisation been ontologically (substantially) expanded, but its effectiveness has also been epistemologically (methodologically) quantified.

5. The final reflection

The first (philosophical-urban) reflection questioned the idea of sustainability in the context of urban issues and the concept of diachronic priority projection. The second (semantic-definitional) reflection contested the formal status of sustainability and its interpretations. The third (semantic-substantive) reflection expressed scepticism about the terminology and the expansive material scope of the central concept. The fourth (institutional-instrumental) reflection explored the history of administration and international legislation concerning sustainable development (including urban contexts) and the ways in which it has been operationalised. It is now time for one final, somewhat shorter observation, delivered in a tone mixing cynicism with academic professionalism.

The idea of sustainable development has proved to be *extraordinarily fertile ground* for the proliferation of scientific terms, concepts, approaches, perspectives, methods, and so on. Ignoring William of Occam's fourteenth-century principle of economic thinking, according to which one should strive for simplicity and not multiply items unnecessarily,¹³ contemporary academics continue to juggle new terms and discourses for facets of reality that seem long-established. Sustainable development has effectively evaded this "Occam's razor", provoking the consolidation or emergence of numerous terms that are seen as appropriate names for aspects of reality that had previously gone unnoticed or had already been observed but were – so it is believed – improperly defined until now.

Consider two examples. Thanks to the philosophy of sustainable development, since at least the 1970s, *urban concepts* that differ from one another but sometimes share at least part of their semantic field have been able to emerge, mature, or establish themselves within the cognitive flow of thought. Today, academic discussions make use of numerous terms relating to the issues of the development in question, their choice – often dictated by the non-academic sphere, e.g. politics or economics – depending on whether it is a question of a city's development model, its spatial form, the organisation of its internal structure, the arrangement of relationship between the city and its region, or rather the quality of life and the urban economy. These include eco-city (since 1975), green city (1980), compact city (1980), sustainable city, smart city, knowledge city, digital city, wired city, resilient city, redesigning a city (1990), externally dependent city (1990), fair shares city (equitable balance, 1997),

¹³ Cf. a 2023 scientific essay by J.J. Parysek (2023).

self-reliant city (1976), just city (2000), XXQuality city (2008), MILU (Multi-Functional and Intensive Land Use, 2000), SIC (Self-Organising Innovative Complex), community city, informed city, transition town, productive city, and regenerative city.¹⁴ If one were to add to the above list the classical models (explanatory, developmental, structural, etc.) of cities – sometimes only loosely associated with or related to the later ones – an analysis of all these concepts would inevitably lead to the conclusion that some are duplicated, while others are overly general or semantically overloaded, perhaps even... empty. For at least several decades, we have been dealing with an excess of urban terminology.

Sustainable development has also inspired a new *model of human being*, namely *Homo sustinens*, envisioned as a more optimal version compared to the previously known objectifications of human subjects assumed in social, economic, psychological, and environmental research, such as *Homo oeconomicus* (above all to him), *Homo historicus*, *Homo rationalis*, *Homo satisfaciendus*, *Homo faber*, *Homo cogitans*, *Homo localis*, and certainly as an alternative to *Homo religiosus*. Arguably, *Homo sustinens* could be situated between the semantic realms of *l'homme de nature* and *l'homme de l'homme*.¹⁵ Proposed by Bernd Siebenhüner (2000), *Homo sustinens* embodies behaviours shaped by the social environment, heightened environmental awareness, state interventionism, and corporate social responsibility (Szelałowska, 2023b, pp. 16–20). However, one must question whether these human models, particularly *Homo sustinens*, represent anything more than flattening hypotheses or projections of scientific paradigms, rather than empirically validated observations.

And that is precisely the point! The concept of sustainable development, regardless of its actual or perceived noble intentions or importance to current generations, has effectively created an archetypal narrative that explains the universe, identifies past interpretive and practical errors, channels international and national financial resources, promotes specific values, generates employment opportunities in roles dedicated to its implementation, and facilitates academic careers in the course of which every new idea requires appropriate worldview and conceptual, operationalisation, technical, methodological, and verification tools. Thanks to the idea of sustainable development, tens of thousands of master's theses, thousands of doctoral dissertations, and likely hundreds of postdoctoral works (i.a. habilitation theses) and professorships have been created worldwide, much like those inspired by Richard Florida's concept of the "creative class" or Bruno Latour's "actor-network theory". This, too, is a form of development – though whether it is sustainable remains an open question.

¹⁴ See Florida, 2002; Holmgren, 2002; Nijkamp, 2008; Mierzejewska, 2009, p. 182; Mierzejewska, 2011, pp. 81–92; Filar & Kubicki, 2012, pp. 190–195; Mierzejewska, 2015, pp. 7–9; Rzeńca, 2016, p. 56; Augustyn, 2020, pp. 80–87; Schurig & Turan, 2021, pp. 161–175; Sekuła et al., 2022, pp. 22–29; Błaszczak, 2023, p. 48; Bryx, 2023, pp. 58–59; Wojewnik-Filipkowska, 2023, pp. 141–157.

¹⁵ Cf. Claval, 1983, pp. 69–83; Madurowicz, 2006, pp. 169–179; Rembowska, 2006, pp. 27–46.

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ABSTRACT

When the idea and the essence do not tally... Some reflections on sustainable (urban) development

Sustainable (urban) development as a way to manage spatial resources is an idea that has been around for centuries. Today, the meaning behind the concept of this development has become blurred. The essay presents five critical reflections. In the first (philosophical-urban) reflection, the idea of sustainability is questioned in the context of urban issues and the concept of diachronic priority projection. The second (semantic-definitional) reflection contests the formal status of sustainability and its interpretations. The third (semantic-substantive) reflection expresses skepticism about the terminology and the expansive material scope of the central concept. The fourth (institutional-instrumental) reflection explores the history of administration and international legislation concerning sustainable development (including urban contexts) and the ways in which it has been operationalised. The final (cynical and academic) reflection notes that the idea of sustainable development has contributed to a proliferation of concepts, ideas, methods, approaches, and research perspectives which, however, all too often seem nothing more than an opportunity to call something familiar by another name as well as a chance to make a career in science.

Keywords: sustainable development, city, idea, critical interpretation

THE THEORY OF SUSTAINABLE DEVELOPMENT IN THE CONTEXT OF THE URBAN AND ARCHITECTURAL HERITAGE OF HISTORICAL CITY SQUARES IN EUROPE

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1. Introduction: sustainability

Nowadays, “sustainable development” has become a catchword put on a pedestal in the international public and scientific discourse on maintaining global sustainability in various spheres of human activity. The topic is extremely prominent in the public debate on actions to deal with climate changes, as well as initiatives to mitigate negative environmental changes, and is equally often used as a political slogan to accompany other popular postulates (“fight climate change”, “adaptation to climate change”, “save trees to combat climate change” etc.). Today’s extraordinary “career” of sustainable development as a chiefly environmental term can be traced to the popularity of the topic of environmentalism, which is related to human overexploitation of the environment (Christensen et. al., 2018). It is also the aftermath of a misunderstanding of the term itself, as the environmental activist community frequently equates it only with climate action. This is hardly surprising, since the concept of sustainable development has a very broad semantic capacity and includes an environmental component. This allows the notion to function as an umbrella term that encompasses an extremely broad spectrum of phenomena and actions aimed at achieving a particular balance. Although many researchers have tried to define its conceptual framework, the concept of sustainable development remains vague (Beckerman, 1994; Hopwood et al., 2005; Mawhinney, 2008). Therefore, for the purposes of this text, the most classical academic understanding of the term has been adopted; it will be discussed exclusively in terms of activities related to the process of striving to eliminate social and economic inequalities as well as caring for the environment.

Sustainable development (SD) has its origins in the 1970s, although it has significantly older roots which can be traced back to the seventeenth and eighteenth centuries, when ideas on sustainable forest management were developed

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in Europe (Blewitt, 2014). The so-called Brundtland Report titled *Our Common Future*, published by the United Nations-sponsored World Commission on Environment and Development in 1987, includes a definition of sustainable development: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of ‘needs’, in particular the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs” (WCED, 1987). The report also describes how it could be achieved.

In Poland, sustainable development has acquired constitutional status (it has even been enshrined in Article 5 of the Polish Constitution), and its definition is given in Art. 3 Sec. 50 of the Environment Protection Act (2001). According to the document, it is “social and economic development which includes integration of political, economic, and social activities with respect for both the natural balance and the sustainability of basic natural processes, with the aim of guaranteeing necessary access to the environment to particular communities or individuals in both the contemporary and the future generations” (own translation). Thus, according to this definition, sustainable development implies responsible and reasonable use of all solutions during the implementation of development processes. Simultaneously, it is very often described as a *sui generis* social contract between the present and the future generations. Nevertheless, the term “sustainable development” does not equate to “sustainability”. To distinguish between the two notions, it is worth quoting a pertinent explication given by UNESCO (2015), namely that “sustainability is often thought of as a long-term goal (i.e. a more sustainable world), while sustainable development refers to the many processes and pathways to achieve it.” However, both terms are related to the same issue – maintaining balance in various spheres of human activity which the scientific community has accepted as detrimental to global stability.

The concept of sustainable development has been widely discussed in scientific literature, so there is no need to divulge in it in too much detail in this text. Nevertheless, it is worth referring to the most popular categorisation of the sectors of sustainable development activities, also known as pillars. According to the popular three circles diagram elaborated by Edward B. Barbier (1987), sustainable development has three pillars: economic growth, social inclusion, and environmental balance. The economic pillar consists in the ability of an economy to grow and provide a high standard of living for its citizens while maintaining a balance between supply and demand. The social pillar focuses on the well-being of people and communities, including issues such as poverty reduction, health care, education, and human rights. Finally, the environmental pillar is concerned with the preservation of natural resources and ecosystems. The problem highlighted in the present article relates partly to the social and partly to the environmental pillar. As an aside to the considerations, it is worth noting that the year 2010 saw the adoption of a policy statement titled

Culture: Fourth Pillar of Sustainable Development at the World Summit of Local and Regional Leaders held in Mexico City. The document reflects the so-called “cultural turn”, which marks a shift in attention to the dominant role played by culture in developed societies of the post-modern era (Steinmetz, 1999). It does not treat culture as a “fourth” pillar or another dimension added to the hierarchy, but rather aims to promote culture, including cultural heritage. The statement reveals an evolution in the approach to sustainable development, which is no longer limited to activities intended to achieve balance in the economic or environmental domains – arguably the most expedient needs in the cross-section of global problems – but is also meant to equally take into account the preservation of individual cultural constituents. Accordingly, the spatial research perspective will directly refer to material cultural heritage, i.e. urban layouts and architecture.

It is important, from the perspective of this text, to recall one of the defining moments for SD, which was the “Earth Summit” held in Rio de Janeiro in 1992, concluding with the member states signing an agreement to launch a process of implementing sustainable development actions. Its outcome was Agenda 21 (UNCED, 1992). Subsequently, the UN Sustainable Development Summit in September 2015 saw the adoption of the 2030 Agenda for Sustainable Development. Agenda 2030 outlines 17 Sustainable Development Goals (SDGs) and 169 related targets to be achieved globally by 2030 (five core areas – the so-called “5Ps”: people, planet, prosperity, peace, partnership) (Zgromadzenie Ogólne ONZ, 2015). Of particular interest in the context of the present discussion is Goal 11: “Make cities and human settlements inclusive, safe, resilient and sustainable”, as well as, indirectly, Goal 13: “Take urgent action to combat climate change and its impacts”.

When attempting to implement the goals of sustainable development – which, in the context of this text, consist in introducing more biologically active areas, including woody plants, into urban space – many forget that sustainability is meant to maintain a balance between different realms of human life, including the above-mentioned three main spheres (pillars). Specifically, in this case, this issue is pertinent to the environmental and socio-cultural spheres. As a consequence, public discourse very often experiences a split and further polarisation of positions on whether high greenery should be introduced in historic urban squares or whether these places should remain as they were historically.

2. Culture and climate

When we study the history of cities, we necessarily study the history of major urban squares. This is due to the assumption that the centre plays a key role in the formation of human settlements, especially in the layouts of European cities. Historic town squares in European cities emerged in antiquity, the Middle Ages, Renaissance, or Baroque, and were located in city centres. These urban

interiors are often referred to with such terms as market (or *Markt* and *Ring* in German), town market, town square, piazza, plateia, as well as plaza. All these signify the most important square in the European city from the perspective of the formation and development of its urban structure. The characteristic features that distinguish historical urban squares from other squares in the city are, first of all: their role in the formation of the urban structure (since they, along with the adjacent streets, constitute complex frameworks around which later urban buildings were planned), location (historical urban squares lay in the strict centre – in the case of the main squares, it was often the geometric centre of the city, which has a symbolic element, as well as the intersection of important urban arteries), genesis (not only related to the period of their foundation and associated characteristic design, but also historical authenticity), layout (their size, shape, proportions, including the compactness of the walls enclosing the squares), representativeness (these are squares that in their appearance do not differ from other examples of squares from the same place and the same historical period), or representability (preserved in good condition with an important status).

Ancient urban squares such as agoras (Ancient Greek) and fora (Roman) were geometric squares with a variety of buildings and structures with different functions (secular, religious, or commercial), surrounded by a portico. Their location at the later stage of their existence bore profound symbolism. First, the square was a public place reflecting the city-state's response to the changing socio-political realities of the polis (democratisation). Second, it was a central point in the city (representing its heart) – and the centre itself is profoundly anchored in human culture (Eliade, 1961). The agoras and fora were commonly intersected by the main urban artery. Many other minor structures were also located there, including fountains, obelisks, and statues. Lots of ancient squares in large Mediterranean cities were built on the sites of former stadiums or theatres (hence their oval or circular shape), and thus opportunities for tree planting were limited, especially given the changing trends in the design of public space over the centuries. For example, today we know that in ancient squares, such as the Athenian agora, there were actually trees associated with religious worship (Griswold & Thompson, 1963).

Small and medium-sized cities in medieval Europe did not need wooded areas inside the city walls. First and foremost, the relatively high density of urban fabric meant that the streets were very narrow, and the town markets were generally quite small. Second, many cities were located in close vicinity to natural forests (this also applies to large cities). Consequently, neither was it necessary to plant trees in the city, nor was there space for it (in large cities as well, since the economic benefit of commercial space was prioritised over the aesthetic or sanitary benefits of woody plants). For the most part, therefore, these geometric city squares were devoid of trees, which is a characteristic feature of so-called “old towns” around Europe (Gieysztor & Rosławski, 1976). The Baroque period saw the pursuit of monumental, highly impressive layouts,

with old urban layouts organised according to geometrical principles. The main element of these layouts were the squares, often oval, sometimes round or rectangular, with radially branching avenues and streets. The effect of these planning processes is clearly observable even today in cities such as Rome, Venice, Bologna, and Paris. Depending on the size and nature of the square, trees would be planted or omitted altogether, since this was a period of rapid changes in planning and the rise of urban greening (trees were introduced in alleys) (Rdzawska-Augustin, 2017). In the nineteenth century, due to the rapid socio-economic development of European cities (the so-called Industrial Revolution) and the associated deterioration of sanitary conditions in the urban environment, a new trend of mass introduction of woody greenery into public spaces (including streets and squares) developed (Zachariasz, 2016). In Poland during the interwar period and after World War II, the greening of historical squares was a very popular trend, and the planted trees became a permanent part of the consciousness of their contemporary users. Nowadays, there are many examples of town squares and markets throughout Europe, including Poland, which underwent such interventions (e.g. Main Square in Krakow or Kosciuszko Square in Białystok).

Nowadays, attempts are often made in the centres of modern large cities in Europe (as well as around the world) to mitigate the impact of the changing microclimate by introducing woody plants into historic urban squares. This is related to several factors: the degree of ground development (impermeability to water), overheating of buildings, and thermal discomfort of pedestrians. Every major city in Europe is struggling with the effects of densifying residential, industrial, and service development. High-density housing and sealing of permeable surfaces result in increased surface runoff, overloading of sewers, canals, or rivers, and problems with flooding. Trees are therefore used to increase the biologically active area in the city, which acts like a sponge (retains water). Urban areas usually also experience the urban heat island (UHI) effect, that is, they are significantly warmer than surrounding rural areas. The term “heat island” is also used to refer to any space that is relatively hotter than its surroundings but generally refers to human-disturbed areas. This effect is particularly noticeable in the summer, which often proves detrimental to people’s health or well-being (Fortuniak, 2003). The potential of cooling public squares in the summer depends on the level of greening, which is why trees are introduced into this space. This solution is designed to improve the quality of using squares – including protecting them against sunlight, preventing pavements and building walls from heating up, and increasing their water retention (Zölch et al., 2019; de Quadros & Mizgier, 2023; Zhang et al., 2024). These issues primarily reflect the efforts taken in terms of environmental sustainability.

The use of woody plants in urban squares is not only of environmental importance. From the perspective of landscape architecture, vegetation is as important an element of the urban structure, which comprises the layouts of streets, squares, buildings, and other constructions. This fact is often forgotten

in scientific discourse, mainly because of the ephemeral nature of plants. Indeed, time is much kinder to buildings than to vegetation, and with the relatively short life cycle of trees (compared to buildings), their role as an element of the urban structure may not be as apparent. Time is also an extremely important factor that determines how certain facts are remembered or recorded in the social consciousness (such as the presence of trees in Polish town squares in the last 70 years, which resulted from the post-war management of destroyed cities and has become a fixture of their contemporary landscape). Approaching the topic of trees in historic city squares, it is also important to consider that cultural heritage consists not only of architectural objects and urban planning, but also of trees. After all, ancient and veteran trees constitute an important educational tool – on their example, we can follow the life cycle of trees growing under different conditions (including the urban environment, which is challenging for vegetation) and observe the natural aging process, which is an extremely instructive experience (Jim, 2017). The advantages of tree planting in historic urban squares presented above are primarily a reflection of the social sphere of sustainability.

If this is the case, why are the effects of introducing trees into historic urban squares described as negative from the perspective of architecture? First, the roots of tall or massive trees, reaching many metres beyond the crown projection area (CPA), can penetrate the historic foundations of buildings and thus damage their structure. A great number of similar examples of the destruction of historically authentic structures and buildings by an expanding tree root system have been identified (Caneva et al., 2009), and the problem has been discussed in the scientific literature for decades (Biddle, 1979). However, the foundation erosion itself is not the only challenge posed by the expanding root system of trees. When it becomes necessary to cut down a large specimen tree that has already died or starts to lean, potentially endangering people, the attempts to remove the root system may cause considerable damage to the construction of historic buildings. This is a problem of technical nature. Second, tree silhouettes obscure the historic scale and layout of the market (Gawryluk, 2011). This issue is related to both the composition of the urban interior and its perception. However, both involve the same process – the destruction of historic (authentic, original) urban fabric, followed by distorting the perception of the square as it used to function in the past generations. The above phenomena associated with the tree planting in historic urban squares concern the cultural sphere of sustainability.

3. Public discourse

The need to introduce woody greenery into the space of historic urban squares is a subject often raised in public debate. The most frequently given reasoning is providing shelter from sunshine in hot weather. These arguments mainly

concern the impact of changing environmental conditions in large cities, where many detrimental phenomena result from, for example, excessive coverage of urban space with impermeable surfaces and the associated UHI effect. Rapidly intensifying sustainability efforts have resulted in planting a larger numbers of trees in many historic squares. However, not every redevelopment initiative has resulted in an increase in biologically active area. Over the past twenty years, many Polish cities have conducted conservation and renovation activities in major urban squares. In their course, many small cities had their existing tree stand transformed. As a result, tree lanes which had existed for at least several decades (i.e. either since the interwar period – there was a tendency to green cities at that time – or since the post-war period, when destroyed cities were rebuilt and former commercial squares were converted into parks and parking lots) disappeared from old town squares. The clearance of trees from historic markets has met with a barrage of criticism, especially in the context of the contemporary discussion on urban climate. Critical voices also stemmed from the fact that trees in old squares had been permanently inscribed in the consciousness of the city's residents – from their perspective, greenery had “always” existed there.

Faced with the need to adapt to climate change, many cities are attempting to respond to the postulates raised by residents. One example of such efforts is the tree planting project in Krakow's Main Square, which aims to restore the layout of plantings that existed in the market in the first half of the twentieth century. However, Krakow's Old Town was founded in the Middle Ages. In that period, trees were not planted in old town squares, as they were urban spaces with chiefly commercial and representative functions. Nonetheless, the reintroduction of trees to the square met with many voices of approval, especially among the residents (Radłowska, 2022; Maciejowski, 2023). The people satisfied with the decision were hoping that trees would provide shade which would improve the comfort of using the square. There were also many critical voices against the initiative. One of Krakow's architects, Wiktor Zin, was a stark opponent of the planned changes. In his view, the city should aim to preserve the original layout of the space, which was treeless (it was not until the interwar period that plantings were introduced) (Lasyk, 2022). Another important argument against the greening project was the potential impact of tree roots on the archaeological sites in the square, which include the ruins of former city buildings.

Questions have also been raised in public debate about the history of the formation of urban squares. It is also important to remember that at the time of their founding, many European cities had a relatively small area and were surrounded by arable fields and areas covered with shrubbery and woody plants. Given this state of affairs, planting trees in historic squares was not considered a necessity, and frequently it would even be seen as a waste of space in an already very densely built-up area. Medieval cities, founded on the remnants of ancient *castrum Romanum* or established next to castles, chartered under the Magdeburg Law and its variants, did not have any green areas within their boundaries; at most, they would have a few sparse trees. Located at their

centre of the city was a geometric market square, which was used mainly for commercial purposes and performed a representative function. This changed with the development of cities over the following centuries. The city gardens or parks created in the eighteenth and nineteenth centuries were established outside the oldest parts of the cities. Among the exceptions were the so-called “*planty*”, or ring-shaped parks established on the site of demolished urban fortifications. Their creation was related to the rapid growth of cities and the need to remove from their structure elements blocking their development outwards.

Although from the perspective of the environmental sphere of sustainable urban design, increasing the area covered by trees in the city may seem justified, there are many case studies showing that the introduction of plantings in historic urban squares did not produce measurable results. Many such projects ultimately proved prohibitively expensive for the cities, as they would select 20–25-years-old trees, much more expensive than young seedlings. The biggest challenge, however, was the high cost of maintaining the vegetation, including irrigation. The issues of planting and maintenance costs are often raised in public debate, mainly by city residents, and vigorously discussed. This is hardly surprising, since some of the municipal investments in Poland are financed from participatory budget, through which the residents are able to decide on the investments to be implemented.

Other voices appearing in public debate are related to the technological perspective, i.e. the issue of damage caused to sidewalks and buildings by tree root systems. These can be particularly problematic in historic areas, where the architecture is already fragile. However, hardly anyone points out that trees may obscure important architectural details of historic buildings and obstruct view. This, in turn, may detract from the overall aesthetic of the square, as well as influence the perception of historic spaces as they have survived to the present day.

Since the beginning of their existence, urban communities have transformed, are transforming, and will continue to transform the urban space they inhabit by shaping it in accordance with the cultural practices inherent in their value system (Guriewicz, 1976). In the twenty-first century, sustainable development has just become a new element of the value system, marking the next stage in the evolution of complex human–environment interactions. Consequently, another question appears: will the greening of historic urban squares, which originally were devoid of trees, ever be seen as an important element of our twenty-first-century value system, or will it be deemed a detriment to the heritage we have left for future generations?

4. Conclusion

In conclusion, the process of introducing trees into historic squares in European cities has twofold implications. In the environmental context, this can be described as sustainable. However, in the social realm, where sustainability

also concerns architectural heritage protection, it has been subject to criticism. From a historical perspective, heritage preservation is crucial, as it is a testimony to the activities and development of past generations.

Even today, communities are transforming the space they inhabit. But in the perspective of sustainability, we must remember not only to reduce the effects of heating and increase the proportion of greenery in public squares, but also to protect the urban and architectural heritage in the form of urban structure, spatial composition, buildings, as well as archaeological sites hidden under the surfaces of historical city squares, which are a testimony to past eras. In contemporary urban planning which follows the principles of sustainable development, compromises are necessary. However, such plans should not disturb the perception of urban spaces such as historic city squares and, most importantly, should not lead to the destruction of architectural objects that constitute the layout of the squares. Concomitantly, they should take into account the needs of city residents and other users of historic squares. Faced with the choice of “architecture or vegetation”, we must first think of how we are planning the development of contemporary public spaces, so that in the future our descendants will not have to deal with the dilemma of sacrificing one form of our cultural heritage for the sake of another.

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ABSTRACT**The theory of sustainable development in the context of the urban and architectural heritage of historical city squares in Europe**

This paper presents a reflection on the theory of sustainable development in the context of the urban and architectural heritage of historic urban squares in Europe. The purpose of this article is to present the divergent sustainability standpoints towards historic urban squares in Europe – the environmental and socio-cultural viewpoints reflecting the two pillars of sustainable development. The public discourse analysis reveals how much the goal of achieving sustainability impacts the historic centres of European cities, where the main challenge is to strike a balance between improving environmental and climate conditions on the one hand and preserving historic architecture and urban layout on the other.

Keywords: sustainability, town square, piazza, greenery, trees

POLITICAL CHANGES AND FOREIGN INFLUENCES: URBAN PLANNING OF BAGHDAD OVER DECADES

Aleksandra Wojtaszek¹

1. Introduction

The territories of Iraq, with their diverse urban and rural communities and tribes with different senses of belonging and cultural backgrounds, became one nation in 1921 (Bernhardsson, 2008). The British replaced the Ottomans, resulting in the establishment of an Iraqi state in the form of a constitutional monarchy remaining under the control of the British Mandate for Iraq.² Baghdad, a young capital, experienced growth in both its boundaries and population (Pyla, 2008), attracting Iraqis seeking better opportunities in the city. This led to the need for urban transformation of the capital. Although Iraq formally gained independence in 1932, it remained under heavy British influences, which led to repeated tribal and ethnic revolts (Pyla, 2008).

First attempts at urban planning in Iraq were undertaken by the British during their mandate in the early 1910s. However, the early efforts to propose an urban development plan for Baghdad were hindered by their incompleteness and fragmentation, largely due to the struggling economy and shortage of local town planners and architects. The discovery of oil in Iraq in 1927 proved to be a pivotal moment, prompting the introduction of new laws aimed at facilitating urban development. Development plans for cities in Iraq were predominantly put forward by international companies, which applied typical models of modern town planning (Elsheshtawy, 2004). Each foreign firm employed introduced different solutions and alternatives, resulting in varied approaches to urban development of Iraqi cities.

The first master plan for Baghdad, prepared by the British company Mino-prio & Spencely and P. W. Macfarlane in 1956, aimed at creating a zoning plan.

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² The British Mandate for Mesopotamia, later known as Iraq, was a period of British administration following the collapse of the Ottoman Empire in the First World War. The League of Nations granted Britain the mandate over Mesopotamia in 1920 (Tripp, 2002).

The second attempt to create a plan for the city was made by a Greek firm led by Constantinos A. Doxiadis, who was contracted for the job by the Iraq Development Board in the mid-1950s. Initially, Doxiadis was tasked with preparing a housing program for Iraq, with particular focus on Baghdad, the city having pressing housing needs which needed to be addressed. In 1958, he was contracted to create the new master plan for the capital. The works were discontinued – and Doxiadis’s contract terminated – shortly after, due to the 1958 Revolution that ended years of royal rule and British control (Pyla, 2008).

The newly established republic and the changing political regimes after the 1958 Revolution started to align with socialist countries. Consequently, the entity commissioned to develop three major urban planning documents of the 1960s and 1970s – which would serve Iraq’s capital for decades – was a Polish state company, Miastoprojekt Design Office Cracow, hereinafter referred to as “Miastoprojekt master plan” (Stanek, 2012). The rapid development of Baghdad and the increasing demand for housing and public facilities in the capital brought the last foreign company into the twentieth-century urban planning scene of the city. In the mid-1980s, the Japanese Consortium of Consulting Firms (“JCCF”) conducted studies to prepare a new development plan for both the city of Baghdad and the entire region. However, these efforts were halted by the Gulf War and economic sanctions imposed on Iraq in the early 1990s, leading to the departure of all foreign companies from the country (BAG_2024_16).³

For decades, foreign experts had played a leading role in shaping the urban layout of Baghdad. In that respect, the Gulf War and international sanctions imposed on Iraq in the 1990s were a watershed moment in the planning history of Iraq. For the first time, Iraqi planners and architects took over the leading role in urban planning. Experts from the Engineering Consulting Office at the University of Baghdad were tasked with creating an Urban Development Project for the capital city. The team developed revised studies, survey maps, regulations, and completed two stages of the new plan. However, the third stage was never accomplished due to the 2003 United States-led invasion of Iraq and the regime change that followed.

The history of urban planning in Iraq, and its capital – Baghdad, reflects both the influence of international expertise and the internal dynamics of politics and governance. Each major planning document proposed over the decades of Iraq’s independence was heavily impacted by the political system in place at the time. Development plans for Baghdad prepared by foreign companies and experts were often filled with ambitious ideas and solutions for the city. Yet, they often resulted in fragmentation and produced separate studies. Moreover, the dynamic political situation on the ground, as well as external circumstances, impacted the development of Iraqi cities. Baghdad,

³ The interviews were conducted during fieldworks in Baghdad and/or online. All respondents agreed to participate only under the condition of anonymity due to security concerns. Each interview was assigned an individual code.

as the capital and flagship city, was – and still remains – a mosaic of various approaches and visions influenced by both the international expertise and the internal power dynamics. The article explores the internal and external powers that shaped urban planning in Baghdad, emphasizing insights from local Iraqi experts. This fresh approach provides a unique, Iraqi perspective on the evolving dynamics of urban planning in the city.

The article is based on literature review, archival research, analysis of planning documents and semi-structured interviews conducted with a selected group of urban actors, representatives of the professional community of Iraqi experts who worked in urban planning sector before, during and after sanctions in Baghdad.

2. Before development plans

Prior to the establishment of Mandatory Iraq in 1917, Baghdad existed as a modest town with a population of merely 100,000 inhabitants. After the British took over administration of the city, it began to boom, expanding its boundaries to incorporate surrounding areas. As the capital of a newly formed nation, Baghdad underwent a rapid transformation, witnessing the spread of military, administrative, and residential sectors into previously uninhabited lands (Pieri, 2008). The British administration launched the construction of strategic infrastructure such as ports or transport networks and, in the 1930s, initiated several housing projects in Baghdad designed by English architects. The aim of estates such as Al-Sikak, Al-Rasmiyyah, and Al-Elwiyyah was to address the growing housing needs in the rapidly developing city (Elshesh-tawy, 2004). Although the plans resulted in successful implementation of the housing projects, their main aim were primarily military objectives and population control (BAG_2024_19).

The discovery of oil in 1927 fueled further economic growth and spatial development of Baghdad. Legal and regulatory reforms were implemented to define neighborhoods and assign each house to a specific neighborhood. However, unregulated expansion of neighborhoods led to a legislative slowdown and prompted the adoption of the Building and Road Law in 1935. The law aimed to instill order and coherence in Baghdad's urban development and brought significant changes to the city's urban landscape through the introduction of zoning regulations, road ratio specifications based on zone types, and plot division into six distinct zones ranging from 100 m² to 2,000 m². However, critics perceived the law as excessively mechanistic, indicating a lack of local expertise (Pieri, 2008).

The British administration influenced the urban planning of Baghdad, intensifying the contrast between the old, traditional households nestled in the city center and the residential areas characterized by sprawling villas on the outskirts. This growing dichotomy underscored the changing socio-spatial

dynamics within Baghdad, as traditional and modern elements collided in the ever-evolving urban fabric of the capital. One notable change was the departure from the traditional urban layout seen in Baghdad and other Middle Eastern cities, i.e. the shift from cul-de-sac streets to clustered rectilinear streets (Pieri, 2008).

3. Minoprio & Spencely and P. W. Macfarlane master plan

In 1950, Iraq saw the establishment of the Iraq Development Board. This governmental entity was tasked with modernization of the nation, a role it played with substantial support from Western consultants (Gerke, 1991). Financed primarily through shares in oil revenues and chaired by Iraq's prime minister, the Board had an ambitious agenda encompassing various infrastructure and development projects. These spanned the construction of dams, irrigation and drainage systems, bridges, roads, factories, power plants, housing, schools, hospitals, and public buildings (Pyla, 2008).

The first master plan for Baghdad was developed jointly by the British firm Minoprio & Spencely and P. W. Macfarlane in 1956. It proposed a zoning plan for the city that focused on a road system connecting the premodern urban core with new river bridges (Bernhardsson, 2008). The final version included new land use policies, plans for the clearance of slum areas, construction of a rural belt, and development of transportation systems (Al-Saaidy, 2020). The first formally adopted master plan for Baghdad was twenty-three pages long and gave a foundation for the future plans of the Iraqi capital (Stanek, 2017b).

4. Doxiadis master plan

In 1955, the International Bank for Reconstruction and Development, member of the Iraq Development Board, recommended a Greek company, Doxiadis Associates, to elaborate a five-year plan to improve housing conditions across the country. In 1958, Doxiadis Associates was tasked with developing a master plan for Baghdad. This master plan had two main objectives: to improve housing conditions and to lay groundwork for urban and regional growth. Central to the project was the concept of "Dynapolis", a term coined by Doxiadis himself, denoting a dynamic city characterized by planned expansion, control, and efficiency. At the heart of Dynapolis was the notion of continuous expansion along a designated axis, strategically designed to mitigate congestion. Along this axis, the business district would flourish, guided by zoning regulations and the strategic placement of public buildings, road systems, and green spaces (Pyla, 2008).

The Tigris River served as the primary reference point for establishing the main axes of growth in the master plan proposed by Doxiadis. Based on the assumption that Baghdad's population would eventually reach three million, the plan set out to define the city's maximum capacity. To accommodate projected

growth, additional roads were proposed to connect the city with its outskirts, forming a broader regional scheme. Commercial posts were accumulated in the city center, emphasizing its significance as a hub of economic activity. Importantly, the plan relegated Baghdad's historic old city to a secondary role, with planning experts advocating for wider streets and lower densities (Pyla, 2008).

Doxiadis' master plan placed strong emphasis on housing, and the "Western Baghdad Community Scheme" was one of its most significant proposals. The scheme was structured around distinct "community sectors", each designed to encompass administrative, social, educational, healthcare, commercial, recreational, and religious facilities, including mosques and coffee houses. The overarching idea was to assign certain residential areas to certain economic classes, often interspersed with green spaces. Notably, it was the first time a form of segregation based on economic or social status, termed the "income hierarchy", was to be implemented in Baghdad. While aligning with government directives to prevent the intermixing of diverse social classes, the Greek firm also attempted to mitigate sectarian and tribal divisions within the urban fabric (Pyla, 2008).

The year 1958 brought the Iraqi monarchy to an end and led to the establishment of a revolutionary republic with strong socialist leanings. Doxiadis' contract was terminated, which meant that until 1966, the planning of Baghdad was based on the master plan created by Minoprio & Spencely and P. W. Macfarlane (Stanek, 2017a, 2020). Had the Greek project been implemented, Baghdad's layout would resemble a chessboard (BAG_2024_19).

5. Miastoprojekt Design Office Cracow master plan

The changing political regimes that ruled Iraq in the aftermath of the 1958 Revolution, from Abdul-Karim Qasim to Saddam Hussein, moved away from the Western influence and leaned towards the Soviet Union and Eastern Bloc. In 1966, the Ba'ath Party became the only legitimate political party in the country and launched an economic and social development program that put emphasis on national planning, agrarian reform, nationalization of the oil industry, industrialization, irrigation, and cultural development. The rising oil revenues allowed Iraq to implement large-scale development projects. In the field of urban planning, the most significant investments included the commission of two master plans for Baghdad (1967, 1973) and the General Housing Program for Iraq (1976–1980), all three delivered by architects and planners from the Polish company Miastoprojekt Design Office Cracow. Within the Eastern Bloc, Poland was a lead exporter of expertise in urban planning and building conservation to countries of what was then called the Third World (Stanek, 2012). After a competition for the new Baghdad master plan in 1961, two contracts were signed, one between Polservice (being an intermediary institution) and the Mayoralty of Baghdad and the second between Polservice and Miastoprojekt Design Office Cracow (Stanek, 2020).

The Miastoprojekt Design Office Cracow commission for the planning of Baghdad encompassed three stages. The first stage (1965–1968) resulted in the Basic Map of Baghdad (“Zoning and Land Use”) and models for residential districts. The document was legally binding and considered as a framework for future development of the city. The second stage (1971–1973) commenced with the Comprehensive Development Plan that was officially approved in 1973. The final, third stage (1973–1974) included detailed plans for selected areas and implementation of the action plan. The additional aim of all three phases was to train Iraqi planners (Stanek, 2020). This provision reflected the general government policy of the 1970s and 1980s, requiring the involvement of Iraqi experts in urban planning, architecture, and engineering in the implementation of all projects commissioned to international consultants and companies in order to transfer technology and knowledge (BAG_2024_16).

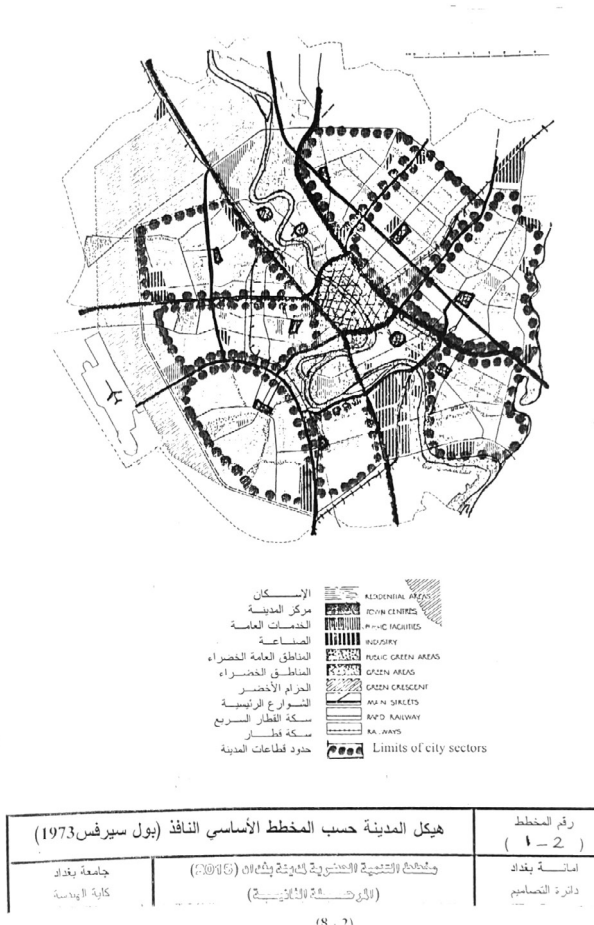


Figure 1. Plan for Baghdad by Miastoprojekt from 1973

Source: University of Baghdad, Mayoralty of Baghdad, 1998, p. 8-2

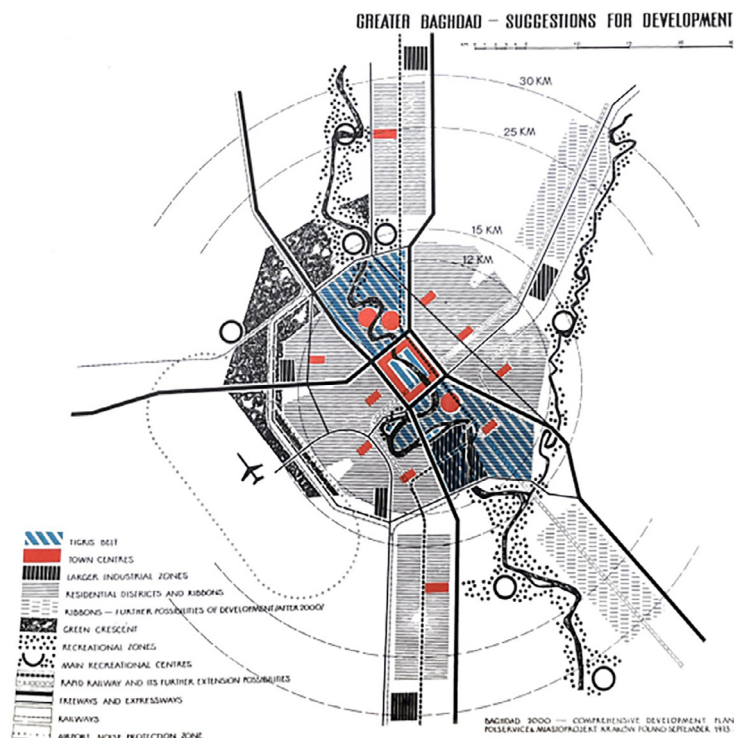


Figure 2. Greater Baghdad – suggestions for development

Source: Polservice, 1973, p. 67

Reportedly, one of the most important factors behind the success of the master plan developed by Miastoprojekt Design Office Cracow was the composition of the Polish team. It included experts from various disciplines and knowledge backgrounds, who jointly conducted thoroughly planned studies and surveys (BAG_2024_01). The Polish project, in Iraq known under the name “Polservice master plan”, was the only legally approved master plan since the 1956 Minoprio & Spencely and P. W. Macfarlane plan (Stanek, 2020). Finalized in 1973, it has served as the governing law for urban development for over five decades (BAG_2024_01). An interviewed Iraqi architect, who cooperated with Miastoprojekt Design Office Cracow, highlighted the cultural affinity and productive working relationship between the Polish and Iraqi experts (BAG_2024_01). As he stated, “Polservice was trying to discuss and consult with local people to know what people think” (BAG_2024_01).

According to the interviewee, the Miastoprojekt master plan was thoroughly prepared and studied, however, it was not devoid of certain biases, resulting from the fact that it was prepared in different demographic and political circumstances (BAG_2024_01). Also, in the opinion of the interviewed Iraqi experts, some relevant issues were not taken into account. For example,

the master plan by Miastoprojekt fell short of meeting the city's needs, particularly in terms of residential areas. Despite the expansion of residential areas, only corner shops and small businesses were provided for in such spaces, severely restricting residents' access to essential services. Additionally, the reliance on secondary centers for meeting the needs of the growing population posed practical challenges (BAG_2024_09). In response to this challenge, the Commercial Street Law was implemented in 1985, changing residential streets into commercial streets (BAG_2024_09). According to the expert involved in planning during the 1990s, the transformation meant to address the needs of local residents, offering greater convenience and accessibility to essential goods and services (BAG_2024_09). In the opinion of interviewees, the Miastoprojekt master plan lacked comprehensive solutions for Baghdad's transportation challenges, which some attributed to the relatively low urgency of the matter at the time of the plan's development (BAG_2024_01).

6. Integrated Capital Development Plan by JCCF

After the adoption of the Miastoprojekt master plan in 1973, Baghdad experienced rapid economic growth and numerous development projects (JCCF, 1981). The scope of changes rendered the assumptions and solutions outlined in the Miastoprojekt master plan obsolete and created the need for more housing units, public facilities, and infrastructure (JCCF, 1981).

By the mid-1980s, the Mayoralty of Baghdad issued a call for a new development strategy for Baghdad, eventually entrusting the task to the Japanese Consortium of Consulting Firms, hereinafter referred to as "JCCF". JCCF was responsible for preparing the Comprehensive Development Plan for Baghdad and proposing the Regional Framework of the Capital Region and the Structure Plan of Greater Baghdad (JCCF, 1981). The assumption underlying the project was that the city cannot be handled in isolation, but must develop together with its surroundings in order to address challenges such as demand for housing, public facilities, and traffic congestion (JCCF, 1981). The objective of the Japanese company was twofold: to respect the traditional fabric of the city while helping Baghdad to walk into the twenty-first century as a promising Middle Eastern hub. The proposed document, titled "Integrated Capital Development Plan" (ICDP), aimed to provide coordination for ongoing projects up to 1985 for integrated implementation, develop a mid-range plan for Baghdad and its surroundings up to 1990, align it with existing commitments, and provide development guidelines for Baghdad's future up to 2000, reflecting its national capital status and significance in the Islamic and Pan-Arab world (JCCF, 1981).

The outbreak of the Gulf War in 1991 led to JCCF's departure from Iraq, which left the city without a completed plan. The Integrated Capital Development Plan prepared by JCCF was never legally approved or introduced as a legal framework for urban planning in Baghdad. According to one of the interviewees,

the Japanese company's approach prioritized studies and surveys without offering overall solutions for the city's pressing issues (BAG_2024_01). However, their cooperation with the Mayoralty of Baghdad resulted in the successful implementation of the Salhiya housing project that, until now, is widely regarded as a role model for residential complexes in Baghdad (see Figures 3 and 4).



Figure 3 (left) and 4 (right). Salhiya residential complex built in the 1980s by the Japanese company

Source: Photos by the author taken in January 2024

7. Master plan by Iraqi consultants

“This is the first time that Iraqi scientific cadres have the responsibility to study the planning and design of the city of Baghdad, and it came as a result of the unjust siege imposed on our struggling country. However, it was possible to make this result a positive act in the development of Iraqi competencies, and give them an opportunity to challenge the blockade and prove their efficiency, and provide an alternative to the development of our beloved capital, Baghdad”, read the introductory statement to Stage One of Urban Development Project for Baghdad (2015) developed by the team of experts from Engineering Consulting Office at the University of Baghdad.

The 1990s were marked by significant geopolitical events, including Iraq's invasion of Kuwait in 1990 and the subsequent international sanctions imposed on Iraq (Gordon, 2010). The sanctions had far-reaching consequences, affecting various aspects of life in Iraq, including urban planning and development

(Alnasrawi, 2001). This period in Iraq's history was characterized by significant challenges in urban planning. Foreign companies and experts in urban planning left the country, and in the mid-1990s, the Mayorality of Baghdad delegated the task of developing a new master plan for the capital to a team from the University of Baghdad. As recalled by a member of the team, "I told them [Mayorality of Baghdad] that without the sanctions, we would never think about Iraqi experts, we would think about foreigners, we would just think to bring foreign experts and companies" (BAG_2024_01).

In the 1960s, the shortage of Iraqi experts made reliance on foreign firms and their expertise inevitable. However, during the 1970s and 1980s, a growing perception emerged that Iraqi experts, despite their availability, were undervalued and overlooked, as institutions continued to favor foreign contractors over local professionals. Due to international sanctions and the resulting dire economic situation of Iraq, the Mayorality of Baghdad could not commission foreign experts and had to seek an alternative solution to develop a new plan for the city. Consequently, it turned to the dean of the University of Baghdad for assistance (BAG_2024_01). At the time, the University of Baghdad ran an Engineering Consulting Office composed of academic staff from various disciplines, who worked on projects commissioned by different public institutions in need of expertise (BAG_2024_16). An interviewed member of the team recalled a scrupulous selection process that brought together a highly qualified group of experts with diverse backgrounds and prior experience, including developing master plans for cities like Mecca and Dubai. Each team member brought specialized knowledge to the table, covering crucial aspects of urban planning such as transportation, heritage preservation, and housing (BAG_2024_01). This collaborative effort in the framework of the University of Baghdad's Engineering Consulting Office marked a pivotal moment in the urban planning history of Baghdad. For the first time, Iraqi planners and architects took the planning of Baghdad in their own hands.

The Mayorality of Baghdad commissioned the Engineering Consulting Office at the University of Baghdad to prepare a three-stage Urban Development Project for Baghdad. Stage One and Stage Two were based on a critical analysis of previous planning documents drawn up by foreign entities and aimed to identify and elucidate the primary challenges facing the city (BAG_2024_09). The need for revising and updating these planning documents stemmed from the major transformations under way in Baghdad, most notably the growing size of its population (BAG_2024_12). Stage One involved reviewing and updating studies and designs developed by foreign institutions, drawing conclusions from these studies, and developing a land use map for the city as of 1998 (University of Baghdad, Mayorality of Baghdad, 1998).⁴

⁴ The Urban Development Project for Baghdad (2015) prepared by consultants from the University of Baghdad had two completed stages. Hereinafter, I will cite them for brevity as "Stage One, 1998" and "Stage Two, 2001".

Alongside the meticulous revision of existing studies and plans, Stage One focused on identifying contemporary urban challenges facing Baghdad, which included transportation, housing, industrial, and commercial zones, and the preservation of green spaces. This initial phase laid the groundwork for subsequent stages of the planning process that aimed at fostering the growth and development of Baghdad (BAG_2024_01).

Stage Two focused on developing proposals, solutions, designs, and plans required for the future development of Baghdad and its expansion prospects (Stage One, 1998). It considered all functions and urban uses of the city, as well as the structural framework for the area surrounding Baghdad, named the Greater Baghdad Area, along with the surrounding region (Stage One, 1998). Stage Three aimed to develop the details, implementation plans, and timeframes for each of the proposals mentioned above (Stage One, 1998). While Stages One and Two were completed and presented to the Mayoralty of Baghdad, the 2003 invasion of Iraq led to the termination of all work related to Stage Three.

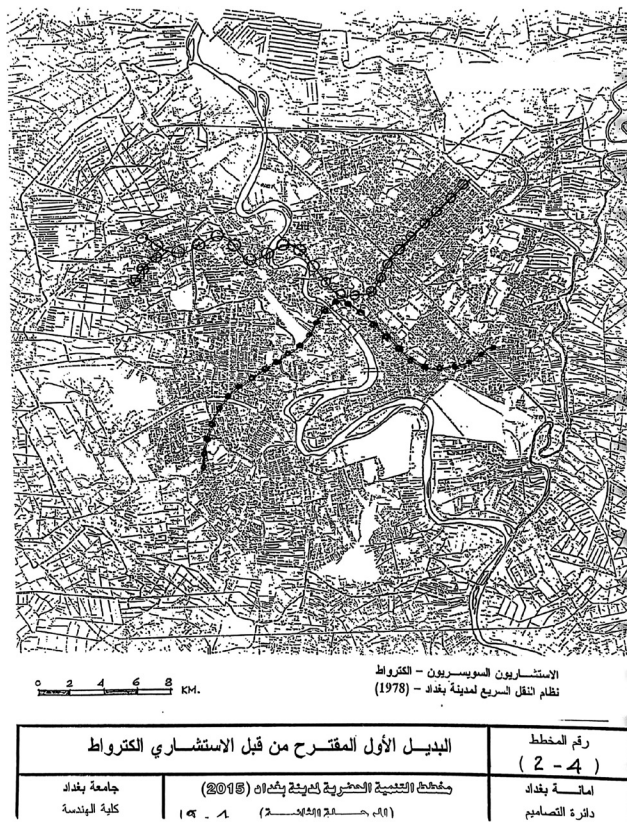


Figure 5. First alternative of metro development created by the Urban Development Project for Baghdad team

Source: University of Baghdad, Mayoralty of Baghdad 2001, p. 25-4

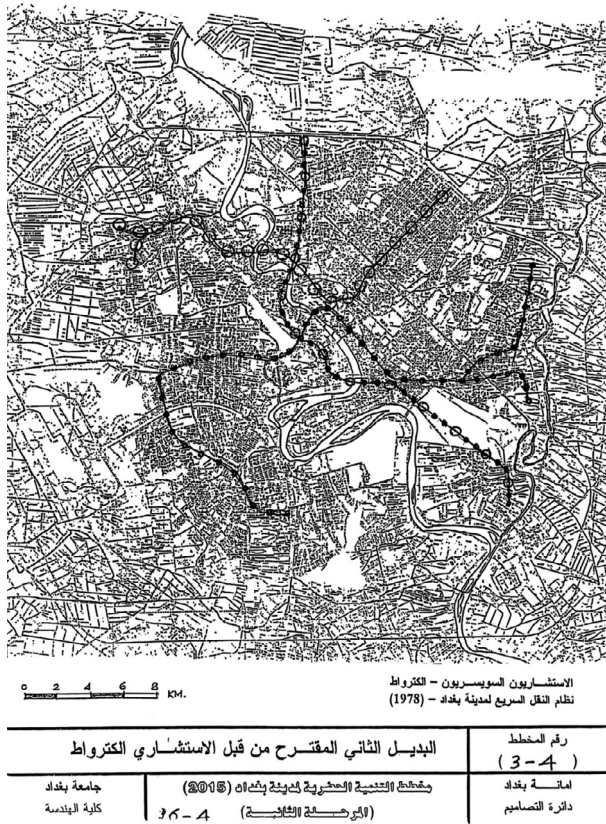
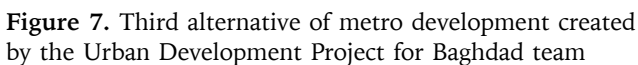


Figure 6. Second alternative of metro development created by the Urban Development Project for Baghdad team

Source: University of Baghdad, Mayoralty of Baghdad, 2001, p. 27-4

Central to the team's vision for Baghdad's future was the ambitious proposal to implement a metro system, presented as a solution to the city's transportation problems and traffic congestion. For this purpose, the team drew on a study from 1986 conducted by a Swiss company, Scott Wilson Kirkpatrick & Partners, which proposed dual metro lines. The team developed three alternatives for metro development, with the first alternative (see Figure 5) featuring two metro lines, differing from the proposal put forth by the Swiss consultant regarding the planned interconnected neighborhoods of Baghdad (Stage Two, 2001).

The second alternative (see Figure 6) for metro development proposed three metro lines (Stage Two, 2001). The third alternative (see Figure 7) featured a circular line encircling the city center and extending from north to south on both banks of the Tigris. The three other lines would run from east to west, intersecting with the circular line. This proposal aimed to connect all main neighborhoods of Baghdad and provide a long-term solution for the most congested parts of the city (Stage Two, 2001).



As emphasized by an interviewed member of the team, the focal points, which the master plan was to tackle, revolved around transportation, housing, commercial zones, and heritage preservation. Notably, the team recognized the significance of heritage areas within Baghdad's traditional urban fabric, engaging in extensive discussions with both the Ministry of Heritage and the Mayorality of Baghdad. The master plan aimed to prioritize preserving and promoting Baghdad's cultural heritage alongside modern urban development, addressing historical neglect of heritage sites by municipal authorities focused on modern infrastructure. This joint effort underscored a broader Iraqi commitment to foster a balanced urban landscape that honors the city's rich historical legacy while accommodating its evolving needs and aspirations. Importantly, in their planning efforts, the team was constrained by the boundaries of the city formalized by the Miastoprojekt master plan established in 1973 (BAG_2024_09). The city administration aimed to curtail urban growth and expansion beyond the boundaries established in the Miastoprojekt master plan of 1973, known

in Arabic as Taghim Al-Madinah (BAG_2024_09). This approach underscored the administrative objective of managing the city's development within pre-determined boundaries (BAG_2024_09).⁵

Initially, the Urban Development Project was meant to provide a framework for the city's development until 2015. However, the authorities later extended the timeline and requested the master plan to cover the city's development goals up to the year 2027. The 2003 United States-led invasion of Iraq toppled the regime of Saddam Hussein and led to long-term instability. In the same year, the Mayorality of Baghdad decided to terminate its contract with the Engineering Consulting Office, shelving Stage One (final version) and Stage Two (draft version) of the Urban Development Project for Baghdad, thereby bringing work on their implementation to an end (BAG_2024_09, BAG_2024_01, BAG_2024_29). The first urban plan prepared by the team of only Iraqi experts passed into history and became a mere memory of the local approach to urban planning of Baghdad.

8. Epilogue – planning after 2003

Following the 2003 United States-led invasion of Iraq and the establishment of a new administration, discussions about creating a new master plan for Baghdad emerged. The World Bank commissioned a foreign company for this task, with the supervision of the project later taken over by the Mayorality of Baghdad. Once again, urban planning of Baghdad was entrusted to a foreign company, thereby marginalizing the contributions made by local Iraqi experts from the university team. The Lebanese company Khatib & Alami was given the task to prepare the Baghdad Comprehensive City Development Plan 2030. As of writing this article in 2024, the plan has not been formally accepted, and the Miastoprojekt master plan remains the binding planning document for Baghdad. In response to the need for ongoing urban development, the Higher Committee, established in 1971, was tasked with addressing evolving urban demands. According to the interviewee from the university team, the committee's role was not to overhaul the existing plan but to respond to emerging needs, such as changes in land use (BAG_2024_09). Their mandate stipulated that if no new plan for Baghdad was adopted within a decade of the last master plan's implementation, they would be empowered to enact necessary amendments to ensure the city's continued development and functionality (JCCF, 1987).

⁵ At the same time, various other initiatives were developing alongside the new development plan. The New Housing Standards report for both urban and rural areas in Iraq was compiled through a joint venture between the Ministry of Housing and the University of Baghdad. Completed in 2017, this document likely aimed to establish updated guidelines and regulations for housing development across different regions of the country (BAG_2024_09).

The history of urban planning in Baghdad reflects a dynamic interplay between external influences and internal dynamics that shaped the city. Foreign firms played a significant role in introducing modern planning models and ambitious projects, yet these efforts were often disrupted by political changes and external circumstances. The transition towards Iraqi-led planning initiatives in the late twentieth century marked a significant turning point. Despite challenges posed by international sanctions, Iraqi planners and architects have demonstrated a commitment to addressing the city's needs and aspirations.

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- BAG_2024_09. Interview with an Urban Development Project team member, Baghdad, 23 January 2024.
- BAG_2024_12. Interview with an Urban Development Project team member, Baghdad, 25 January 2024.
- BAG_2024_16. Interview with an Iraqi architect, online, 4 March 2024.
- BAG_2024_19. Interview with an Iraqi architect, Baghdad, 14 April 2024.
- BAG_2024_29. Interview with an Urban Development Project team member, Baghdad, 1 May 2024.

ABSTRACT

Political changes and foreign influences: urban planning of Baghdad over decades

The article aims to explore the history of urban planning in Baghdad. Since Iraq's establishment as a nation in 1921 under the British Mandate for Mesopotamia, Baghdad emerged as a focal point of growth, attracting a diverse population. The discovery of oil in 1927 led to the introduction of modern planning models by international companies, with British and Greek firms contributing to initial zoning and master plans. Political changes such as the 1958 Revolution led to a shift towards socialist ideologies. The 1960s and 1970s saw Polish involvement in planning, resulting in developing the most important planning document for Baghdad. The last foreign impact on urban planning in the city in the last century was marked by a Japanese company which worked there in the 1980s. The Gulf War and the international sanctions imposed on Iraq in the 1990s hampered foreign participation in urban planning, prompting Iraqi planners and architects to take on leading roles. Despite the deteriorating internal and external circumstances during the hardships of the 1990s, Iraqis developed the first master plan for Baghdad relying solely on local expertise. The research in the present paper is based on a mixed-methods approach, including fieldwork in Baghdad, archival research, and in-depth interviews with Iraqi experts who worked as consultants at universities and/or public institutions in the urban planning sector during the sanctions. It highlights the complexity of urban development in Baghdad, characterized by a blend of influences and visions, and stresses the importance of local knowledge alongside foreign expertise.

Keywords: urban planning, master plan, Baghdad, foreign expertise

SAN CRISTÓBAL DE LAS CASAS – POLICY-INDUCED SPATIAL SEGREGATION AND ETHNIC DIFFERENTIATION

Mirosława Czerny¹

1. Introduction

In Mexico, ongoing complex socio-economic processes – dating back as far as the colonial era and only becoming further entrenched since the Republic until now – have led to both society in general and the spatial model for the distribution of the population being characterised by the exclusion (i.e. marginalisation, separation, and pushing certain groups to the margins, both socially and territorially) of minority ethnic groups, whether these are present in rural or urban areas. This phenomenon manifests itself in, among others, a lack of opportunities to benefit from state-provided services in the same way as other groups in society, e.g. in terms of activities aimed at development and guaranteeing equal access to social and civil rights and privileges – not least in regard to a whole array of social services (Vite Pérez, 2005). The *de facto* lack of support extended to ethnic groups by the state leads to the latter's role being undermined, with state institutions having only a limited influence on the way in which many traditional Indigenous communities function. These groups, in turn, prefer to solve their problems in accordance with the internal order in place; in such cases, the Mexican state often fails to intervene (even, for example, when it comes to the maintenance of public order in particular housing estates) (Vite Pérez, 2005, p. 215).

The population structure of the southern parts of Mexico includes the Native – or Indigenous – people. They form self-governing communities following their own laws and rules, to the extent that the Mexican state has relatively little to say as to how these groups function or what cultural norms they adhere to. As some researchers claim, this “estrangement” from state governance can be seen in a rather different, positive light – as allowing these communities to retain their cultural identity, manifested *inter alia* in a constant process of reproduction of customs and ways of using local resources.

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“In this case, ways of proceeding and habits are parts of culture, since they also represent elements of the inheritance of knowledge and skill. The interpretation of these may thereby function to ensure that members of a group understand each other and are able to reach agreements” (Habermas, 1999, as cited in Vite Pérez, 2005, footnote 1). The beliefs and customs of ethnic groups can thus be seen as a token of resistance against state interference in cases when the authorities are involved in or support initiatives aiming to expropriate land from Indigenous peoples, displace communities from the land belonging to them, and pursue the economics of exploitation (Vite Pérez, 2005). The Native population, deprived of state protection, develops its own survival strategies – which may take the form of entire ethnically homogenous districts located on the peripheries of cities. In this way, they also contribute to growing socio-spatial segregation.

2. Segregation and the right to the city

The economic situation of Mexico’s urban population has worsened since the 1980s, when the country adopted a series of neoliberal reforms. The people who lost assistance from government organisations began to migrate to urban centres in search of work in the informal economy – notably in peddling, unskilled jobs, and transport. Work in the informal sector constitutes the core source of livelihood for some 30% of all city-dwellers across Latin America. However, this indicator may vary significantly between individual countries and regions; it reaches the highest values in places where Native people prevail within the population structure (Czerny, 2014). Individuals working as street vendors (adolescents and children in particular) are highly exposed to acts of violence and discrimination (Chi Aguilar et. al., 2019, p. 113). Furthermore, most Indigenous people perform types of labour which only allow a precarious living, with no certainty or permanence of employment and no welfare protection or other kinds of benefits applying to contracted employees. Engaging in mobile sales, selling on the move, or itinerant trade is a survival strategy in areas with high levels of unemployment. “Public spaces in the city become a setting for individual and collective stories in which rural migrants – primarily those of Indigenous descent – rewrite their stories in the conditions of inequality and social, political, economic and cultural disparity” (Ramírez Kuri, 2003, pp. 31–35, cited in Chi Aguilar et. al., 2019, p. 113; own translation).

Socio-spatial segregation is a phenomenon observable in most cities around the world. In addition, in the urban centres with multi-ethnic populations, the economic divisions rooted in income disparity often overlap with those along the ethnic lines. Segregation is often a consequence of dynamic growth in urban population caused by a large influx of migrants. Still, its impact is not only felt by first-generation immigrants but also extends to further generations (Zanfrini 2007, p. 108). The newcomers are stigmatised and excluded from

many spheres of life in society. Segregation may manifest itself in the form of physical (spatial) separation of a defined group of people from the other inhabitants (Wieviorka 1992, p. 129), but it may also affect the group in terms of access, dignity, and level of interest shown by the authorities.

It was precisely the phenomena of segregation, fragmentation, exclusion of certain groups in society, stigmatisation, etc. that sparked the debate on people's right to the place their inhabit, to fair treatment, to the protection of public institutions, and so on. These considerations have given essence to the concept of "the right to the city" (Spanish: *derecho a la ciudad*).

The first years of the twenty-first century indeed witnessed a surge in the discussion of "the right to the city", whose leading figure was David Harvey. The first of his works on the subject, combining Marxist rhetoric with an urbanistic perspective, was *Social Justice and the City* published in 1973 (Borja, 2019). However, this year should not be considered as the very beginning of the concept of the right to the city, given that the term first appeared in 1968, when Frenchman Henri Lefebvre came out with a book bearing this very title. The work discussed negative phenomena experienced by cities in capitalist states, arguing that such countries considered urban centres commodities operating solely in the name of accumulated capital. The right to the city was thus a counter-reaction to this trend, restoring the true *raison-d'être* of an urban settlement, ushering in a possibility of wellbeing (living well) for all its residents, and making the city a meeting place in which it is possible to construct a collective way of living (Mathivet, 2009; own translation).

According to the UN, the right to the city may also be defined as a set of criteria for what we can describe as being inhabitant-friendly, for example in terms of the following characteristics involving social relations:

- i. Freedom from discrimination on the grounds of gender, age, health, income, nationality, ethnic origin, migration status, political and religious views, or sexual orientation.
- ii. Gender equality, with all necessary steps to combat all forms of discrimination against women and children.
- iii. Inclusive citizenship, with all city residents (be they permanent or temporary) guaranteed equal resident status and treated fairly regardless of their identity and background.
- iv. A high level of participation in policymaking, including the formulation, definition, and implementation of budgets underpinning urban policy, as well as urban planning, with a view to improving transparency, efficiency, and inclusion of diverse inhabitants and the organisations which represent them (ONU-Habitat, 2020).

The World Charter for the Right to the City introduces and expounds on a new collective right for urban inhabitants, especially those forming part and representing vulnerable and disenfranchised groups. The measure is meant to give such groups a legitimate right to act and organise according to their practices and customs. Its eventual aim is to empower vulnerable groups to

fully exercise the freedom of self-determination, as well as to provide them with an adequate standard of living (Borja, 2019).

As indicated by the findings in the scholarly literature on the subject, the Indigenous population seems to be excluded from the right to the city as defined above. Our work has provided further evidence in support of this thesis. We have reached our conclusions by way of in-depth interviews with four female street vendors working in the informal economy as well as with children selling goods in the streets unsupervised, which we conducted during field research in February 2024. We have provided context for our findings with the use of statistical data on the population of Indigenous people with an AEGB breakdown sourced from Mexico's population censuses.² We have also engaged in participant observation.

3. San Cristóbal de Las Casas – a city in the Maya world

The city of San Cristóbal de Las Casas currently has a population of some 200,000 inhabitants, which makes it a medium-sized urban area by the Mexican standard (and criteria). It is located at an altitude of about 2,130 m MSL, in the Chiapas Highland, forming part of the socio-economic Region V – going by the name of Altos Tsotsil-Tseltal – which includes 17 municipalities.

The city has become an important administrative, commercial, and service centre for the extensive agricultural region in the western part of the state of Chiapas. It is a key transport junction along the route connecting Mexico with Guatemala. The city's dynamic population growth is linked to influxes of migrants from rural areas, encouraged to settle there following the armed insurrection of 1994 in defence of the region's Indigenous community (Cantú Luna & Fenner Sánchez, 2020). The twenty-first century has brought a number of infrastructural projects to the area – above all the *Tren Maya* railway line. This has stimulated the development of tourism; in fact, it has come to be a key economic sector, not least due to new job opportunities it has created in the city.

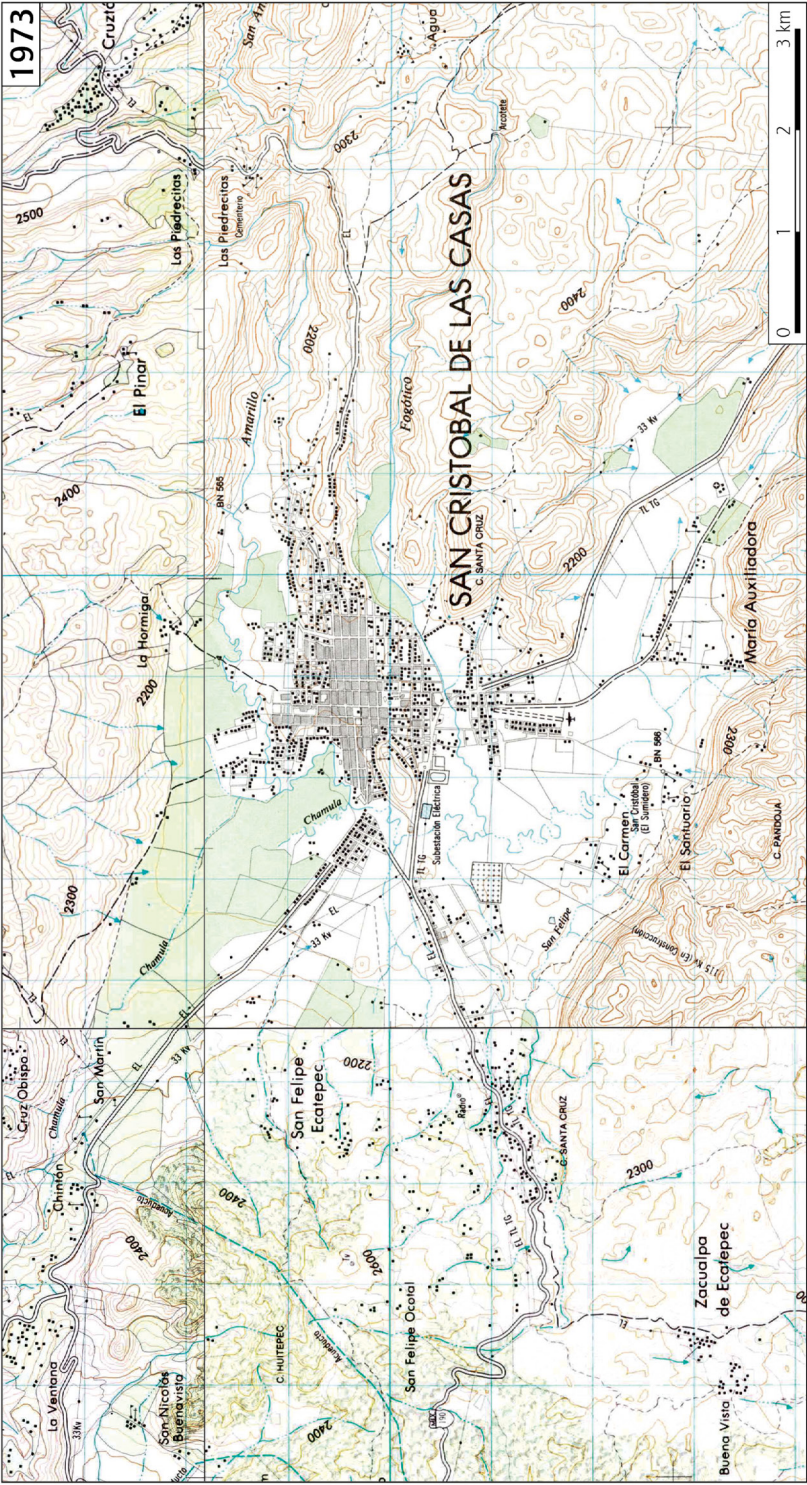
San Cristóbal de Las Casas was founded by Spaniards in 1528 as an administrative centre of the mountainous region of the Chiapas Highlands, densely populated by Indigenous people. The first settlement in the area, named Ciudad Real, was developed at the bottom of a mountain basin surrounded by forests and wetlands fed by a river and mountain streams. That same year, *barrios* – i.e. quarters – with an Indigenous population came into existence. The inhabitants of San Cristóbal de Las Casas took advantage of the existing

² “The AEGB or Área Geoestadística Básica is the territorial extension corresponding to a municipality's sub-divisions, either urban or rural. The units in the Áreas Geoestadísticas Básicas Urbanas sub-category are at the level of a set of blocks or quarters. [...] The limits of an urban AEGB are thus delineated precisely by the inclusion of given streets, avenues, walkways, or any other feature readily identifiable on the ground” (ADCA89, 2021).

environmental conditions to engage in farming. The Spanish brought wheat to the region and built windmills (Cantú Luna & Fenner Sánchez, 2020; Gutiérrez Narváez, 2016). The settlement was eventually fortified. As was the case for other Spanish centres founded in regions densely populated by Natives, the locality experienced far-reaching spatio-ethnic polarisation, with the Spanish occupying quarters in the centre of the urbanising area and the Indigenous population relegated to the peripheries (Aubry, 1994). Consequently, cities would develop along a dual path, differently in the parts inhabited by the Spanish and in the parts inhabited by the Native people (Macías & Avendaño, 2014). The phenomenon of socio-spatial polarisation persisted throughout the entire colonial period and has essentially continued into modern times. Importantly, as argued by J.M. Macías and A. Avendaño (2014), the Spanish kept this bipolar model of urban development in place in order to secure a steady influx of workforce (especially in their administrative and mining centres and their key transport hubs) while upholding the social hierarchy intended to prevent Indigenous uprisings against the coloniser and ensure better control over the processes of city governance. The latter was particularly important in the wake of unforeseen natural disasters – in the case of San Cristóbal, of tragic flooding.

During the colonial era, the built-up area of San Cristóbal de Las Casas was surrounded by wetlands, rivers, and streams flowing down into the basin from the mountains, as well as by countryside with arable fields. The city grew at the expense of the wetlands, and although the surrounding uplands were still covered with trees, the forests were increasingly exploited for timber and charcoal production. New urban districts were steadily coming into existence, with areas of agricultural production shifting onto the mountain slopes (Cantú Luna & Fenner Sánchez, 2020, p. 78). According to J. Artigas (1991), the city space developed in a centrifugal manner until the mid-twentieth century, but later on gave way to centripetal development. The middle of the century saw the draining of the central wetlands, subsequently built-up with new urban infrastructure. The influx of immigrants to the city coincided with the construction of the southern section of the Pan-American Highway linking Mexico and Guatemala. The stretch connecting San Cristóbal de Las Casas with the central regions of the country was completed in 1950 (Cantú Luna & Fenner Sánchez, 2020).

Still, it was ultimately the (unstable) political situation in the south of the country that triggered the rapid increase in the urban population. The 1970s brought social unrest and then disorder to southern Mexico, rooted in both religious and political conflicts. The Native people were seeking shelter in cities and migrated, among others, to San Cristóbal. This marked the first major phase of immigration bound to change the structure and scope of the urbanised area (Cantú Luna & Fenner Sánchez, 2020). “The population pushed out of its villages – mainly inhabited by the Tzotzil and the Tzeltal – took shelter in the city. It settled in vacant plots in the north, on the local mountain slopes, with wetlands being converted into building land” (Cantú Luna & Fenner Sánchez, 2020, p. 80).



Map 1a. San Cristóbal de Las Casas. Extent of the built-up area as of 1973

Source: INEGI (n.d.)

The region's tense political situation – also resulting in forced resettlement – was further exacerbated by natural disasters, which eventually ushered in a new model for the methods and locations of construction projects in the city. The year 1971 brought a flood to the area, which was followed by far-reaching investment in water infrastructure primarily aiming to drain land, for instance by running all the watercourses locally, along underground tunnels. As a result, some 600 ha of land were dried – and swiftly developed with new settlements. This process was the most dynamic in the southern part of the city (García, 2005). The changes of water regime in the basin combined with social problems brought about by the large population influx significantly exacerbated the long-persevering problems with inadequately developed infrastructural networks. Water supply in the city's new peripheral districts was a particularly weak spot.

Map 1a shows the extent of the built-up area of San Cristóbal de Las Casas as of 1973. Although it was published in 1984, the aerial photographs used for its production had been prepared a decade earlier. The map shows the contiguous urban area with a distinct central district comprising regularly-organised quarters and dispersed construction on the peripheries – both to the north and south of the centre. It is in the latter that the Indigenous population is concentrated. Agricultural land prevails in the east.

The increased migration, which started in the 1970s, led to rapid urbanisation of the northern areas on the mountain slopes. Concomitantly, it resulted in the wetlands surrounding the central parts of the city drying out or being actively drained.

In 1994, the state of Chiapas became the arena of an armed Indigenous uprising against the central government. The offensive, instigated by the Zapatista Army of National Liberation, led many residents of the countryside to flee from combat zones. They sought refuge in San Cristóbal de Las Casas, with new residential districts soon sprawling out on previously uninhabited land. It should be stressed that the large group of newcomers to the city following the uprising included people from other Mexican states and even other Latin American countries. In the case of the latter, they would often arrive in Mexico wishing to support the Zapatista movement.

Irregular residential districts came into existence in the protected zone, which in particular encompassed the mountains surrounding the city as well as the wetlands in its northern part (Cantú Luna & Fenner Sánchez, 2020, p. 80). The same period saw the beginnings of the stigmatisation suffered by the inhabitants of the city's northern sections (Toledo Garibaldi, 2022).

The expansion of built-up area resulting from subsequent population influxes was indeed worthy of dubbing it a "sprawl", given its chaotic and uncontrolled nature which posed a threat to the surviving forests and wetlands around the city, both on the mountain slopes and inside the basin. The inevitable consequences of this process were severe environmental issues, not least the degradation of the ecosystem (above all affecting forests), changes of land

use in the wetlands within the basin, the establishment of unregulated quarries to supply building material, improper waste management, and problems with water supply and distribution (Cantú Luna & Fenner Sánchez, 2020).

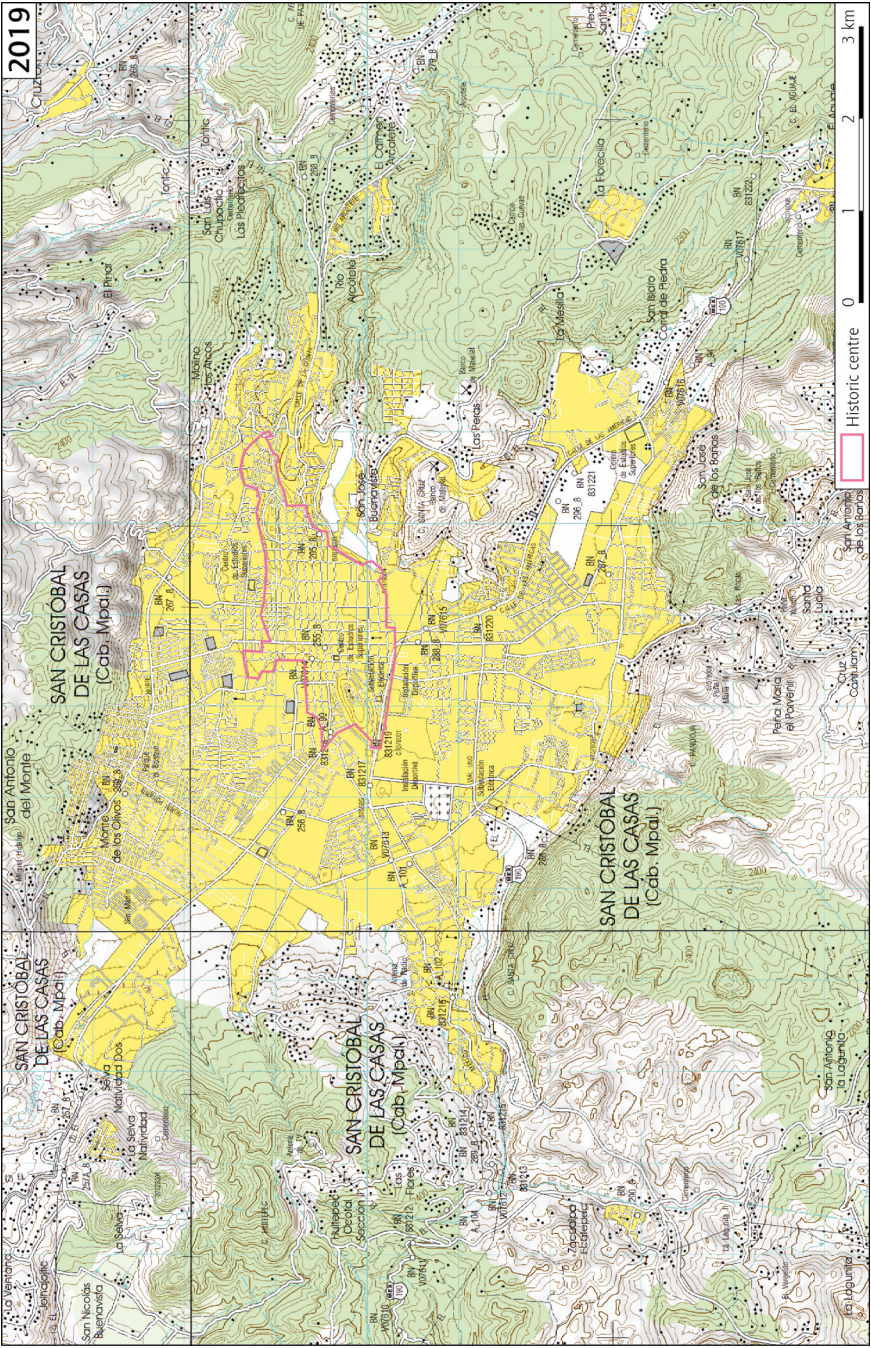
Mexican scholars have named at least three factors which over the last thirty years have contributed to the city's population growth and to urban sprawl on the mountain slopes. Of these, the principal one is the political and religious conflict that has marred the entire state of Chiapas over many decades. The second issue mentioned is the high rate of natural population growth. The third contributor is the growing demand for housing and access to technical and social infrastructure (Hernández & Ruiz, 2013). In turn, G. Montoya and J.F. Hernández (2013) have put emphasis on a different aspect of the issue, namely on the significance of the tourism sector. They argue that it has pulled in migrants who have already been pushed out of the Altos region, fleeing the ongoing civil war.

4. The spatio-social structure and the right to the city in San Cristóbal de Las Casas

From the very moment of its foundation by the Spanish, San Cristóbal de Las Casas was considered the centre of Hispanic authority and colonial domination in a region densely populated by the Indigenous population. While the city was home to Creole people, the rural areas were populated by Natives. However, even as late as 1970, there were still only slightly over 30,000 people living here. It was only when the conflicts brewing in the Mexican society erupted that the population structure changed. The whole period of the 1970s through to the 1990s brought mass movements of Native people and growth of cities, above all in the San Cristóbal de Las Casas area (Chi Aguilar et al., 2019, p. 117). This influx was so dramatic that it took just a decade for the city's population to double, and it went on growing at a rapid pace through to the end of the twentieth century. As Mexican authors note, Mestizo and Creole people both view this situation as a kind of an "invasion" that threatens the identity of their urban culture (Chi Aguilar et al., 2019, p. 118). According to the 2010 census, San Cristóbal de Las Casas had a population of 186,000 (of which the Natives – mainly the Tzotzil and the Tzeltal – accounted for around 30%). However, by 2020, the municipality was recorded to be inhabited by some 215,900 people, of which 103,900 could be described as Indigenous (INEGI, 2020).

Map 1b shows the extent of the urban area in recent times. As can be noted, the city extends farthest in the northwestern and southeastern direction, which is due to the local topography.

J.B. Cantú Luna and G.M. Fenner Sánchez (2020, pp. 77–78) argue that San Cristóbal de Las Casas was founded on an initially innovative model on account of its dual nature resulting from the division between the part inhabited by Spaniards and a separate section home to the Indigenous population.



Map 1b. San Cristóbal de Las Casas in the twenty-first century

Source: INEGI (n.d.), Gobierno del Estado de Chiapas (2006)

The northeastern part includes districts with Mexican and Tlaxcaltec residents – in some documents they are treated as areas settled exclusively by the Natives. While the bulk of their population indeed consists of Mexicans and Tlaxcaltecs, it also comprises Natives incoming from other regions of Mesoamerica (Viqueira, 2007, p. 34).

Increase in population 1950–2020

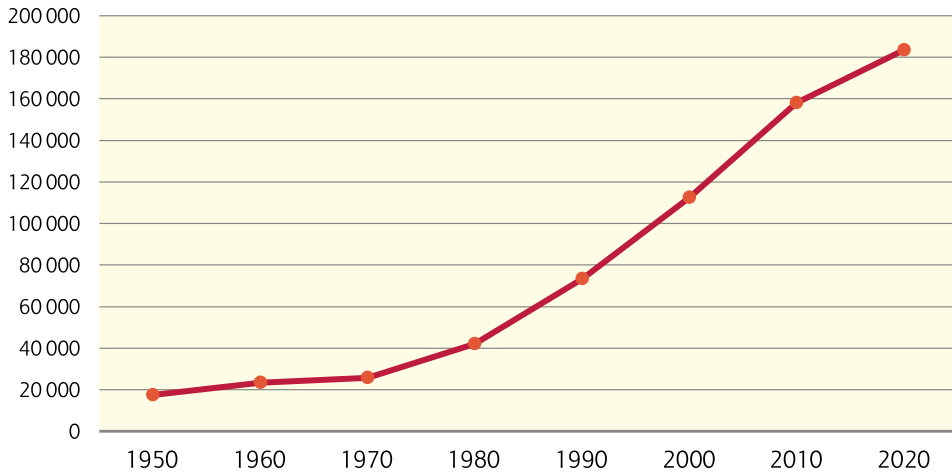
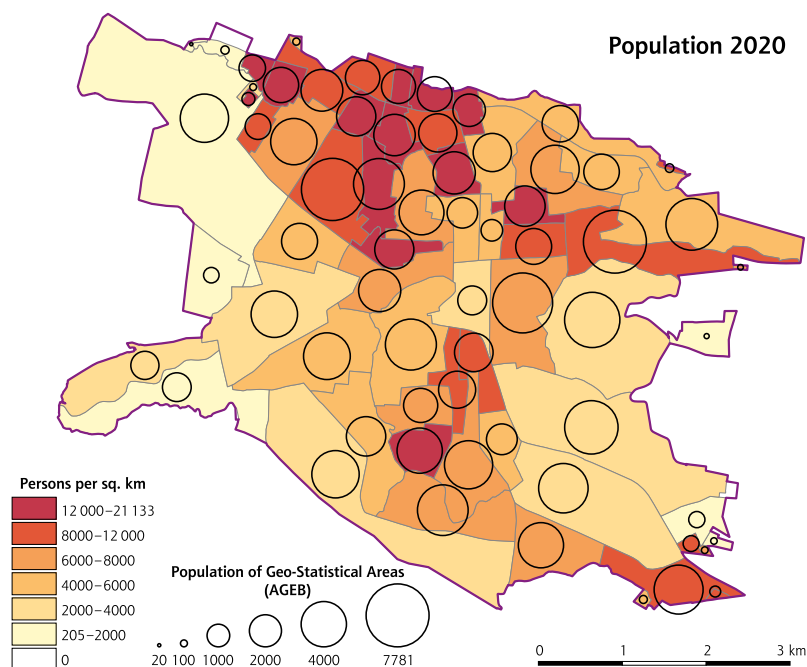


Chart 1. Population growth, 1950–2020

Author: Andrzej Czerny, based on data from INEGI

The models for the city's spatial structure and urbanisation processes were and are based mainly on ethnic differences. The assumptions behind the development of the city under the Spaniards were for this division to facilitate spatial management and improve the urban centre's functional structure (Macias & Avendaño, 2014). The consequences of these decisions are apparent in the present day, as the poor Indigenous population occupies the peripheries while the centre is home to rich representatives of the middle class – most often Mestizos (or *ladinos*, as they are called here). In the city centre, Natives account for less than 40% of the population, but things are different on the outskirts, with the corresponding figure reaching 75% in the case of the northern residential districts and even 95% of those in the east. The residential districts or housing estates of San Rafael, Periférico Norte, La Florida, Morelos, El Edén, and Emiliano Zapata are described as inhabited exclusively by Natives (Chi Aguilar et al., 2019, p. 119).

Map 2 shows the distribution of the city's population within the urbanised area, along with population density. The spatial distribution reflected in the illustration shows a clear division into densely-populated districts settled by Indigenous people (peaking at over 12,000 people per km²), as well as more sparsely developed areas elsewhere (below 6,000 people per km²).



Map 2. San Cristóbal de las Casas. Population as of 2020

Author: Andrzej Czerny, based on data from INEGI

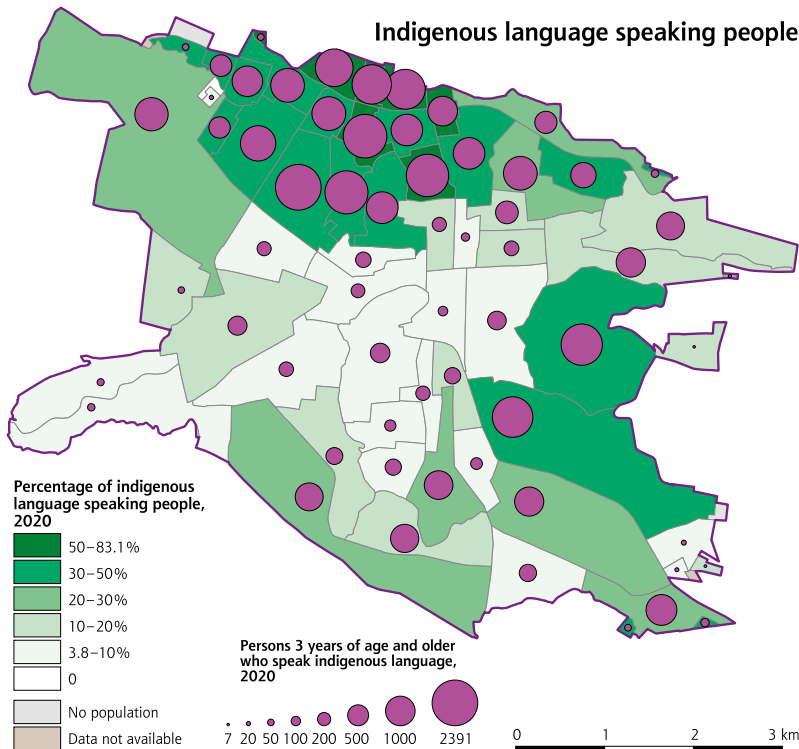


Figure 1. A view of the northern districts of San Cristóbal de Las Casas

Author: Andrzej Czerny

This phenomenon finds its confirmation in photographs, which show the built-up areas sprawling out to the peripheries, with some district developing on steep slopes with a high risk of landslides.

Map 3 shows the distribution of the population of people over 3 years old who use one of the Indigenous languages alongside Spanish. The city's residents falling into this category are concentrated in the districts to the north and east of the central area.



Map 3. San Cristóbal de Las Casas. Speakers of Indigenous languages, 2020

Author: Andrzej Czerny, based on data from INEGI

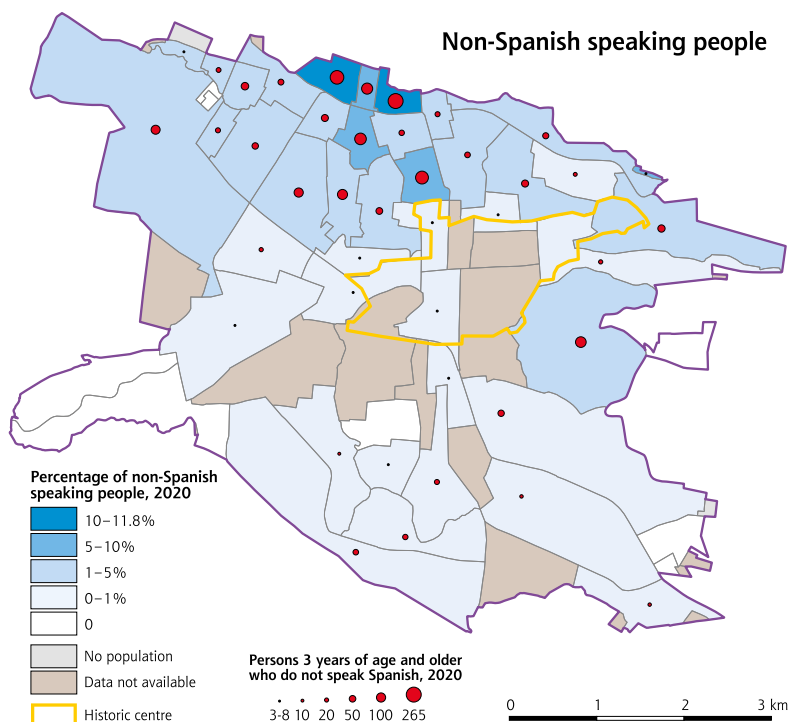
Map 4 presents the distribution of the non-Spanish speaking population. In this aspect, it is important that children be taken into account, given that the offspring of non-Spanish speakers most often do not attend school and therefore lack contact with Spanish in their daily lives. The population distribution in Map 4 seems once again to overlap with the one presented in Map 3. The greatest concentration of bilingual people can be found in the city's northern housing estates and districts. Census data suggest that more than 10% of the whole population in these areas may not speak Spanish.

As has already been noted, the spatial development of San Cristóbal de Las Casas proceeded very rapidly from the 1970s onwards. The city received waves



Figure 2. Native boy selling handicrafts on Madero Street (in the city centre)

Author: Andrzej Czerny



Map 4. San Cristóbal de Las Casas. Non-Spanish speakers, 2020

Author: Andrzej Czerny, based on data from INEGI

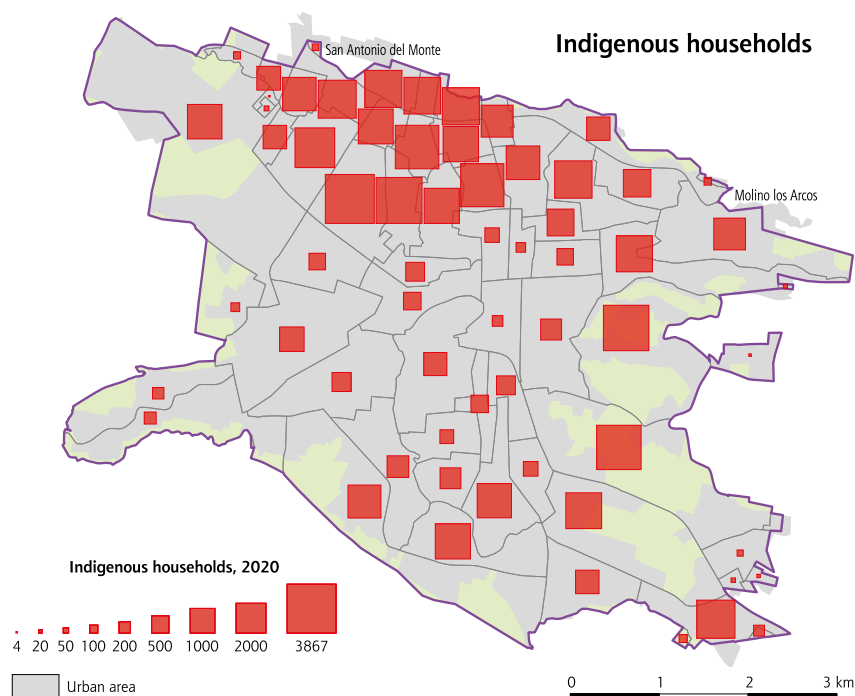
of newcomers representing various Indigenous groups in Chiapas Highlands, arriving to the city to seek shelter from violence, poverty, and persecution. The expulsion of the Indigenous population from its lands was motivated by religious, political, and economic reasons. Many of its victims came from the Chiapas villages of Chamula, Oxchuc, Huixtán, Larráinzar, and Mitontic. Concomitantly, the city saw an influx of adolescents migrating to take up education (Gutiérrez Narváez, 2016, p. 3). Thus, the last fifty years have seen a major reshaping of the ethnic structure in San Cristóbal's population. From the early twenty-first century onwards, it has become clear that the Tzotzil and the Tzeltal are the dominant ethnic groups, originating from the villages closely surrounding the city. However, many migrants have arrived from other parts of Yucatán (Villafuerte et. al., 2010).

Down the centuries, relations of a strong and specific nature have become instilled between the Creole inhabitants of the city proper and the Indigenous population living in its vicinity. Still, economic ties also held sway. Traditionally, the city supplied the surrounding countryside with textiles, liquor, candles, gunpowder, hats, bags of all kinds, and certain grocery products. The Natives, in turn, were a source of produce and various handicrafts. In contrast, today, many of those who would have once been farmers supplying agricultural products are now permanent city-dwellers engaged in commerce (Gutiérrez Narváez, 2016, p. 4).

The relations between Indigenous people and Mestizos in the city currently encompass different forms of cooperation, tension and conflict, pretence or hostility, which are expressed in various manifestations of racism. In most cases, these manifestations are associated with the processes of construction and reproduction of Indigenous and Mestizo identities in the city [...]. The relations between Indigenous people and Mestizos in the city have always been marked by a struggle for domination taking the form of a series of conflicts, confrontations, and crises, among them the emergence of the Zapatista Army of National Liberation (Gutiérrez, 2014, p. 25, cited in Gutiérrez Narváez, 2016, p. 4; own translation).

Since 1994 (i.e. in the period of intensified migration of the – often local – rural population into San Cristóbal de Las Casas, be it voluntary or forced), the share of Indigenous communities in the urban population has continuously grown. The process commenced in the 1970s, when rural inhabitants started to abandon their farms for economic reasons. In the 1980s, the trend continued with the exacerbation of the political and economic conflict. In the 1990s, the Municipality of San Cristóbal de Las Casas had 90,000 inhabitants, among whom some 20,000 were Indigenous. However, by 2000, the total population had reached 120,000, a half of which could essentially be described as Native. Today, the number of Indigenous residents of the city exceeds 100,000 (Gutiérrez Narváez, 2016, p. 5; INEGI, 2020).

Map 5 present the distribution of Native households in the city. Similarly to Maps 3 and 4, this indicator yet again points to the concentration of *colonia*-type settlements in the northern and eastern parts of the city.



Map 5. San Cristóbal de Las Casas. Indigenous households, 2020

Author: Andrzej Czerny, based on data from INEGI

The growing number of such households in the southeast of San Cristóbal reflects the process of draining local wetlands and the subsequent settlement of those areas by incoming migrants.

The Indigenous population has experienced a marked change in its economic situation as compared to the 1960s and the 1970s. At that time, Natives held the worst-paying jobs, not requiring any particular skills or qualifications, possible to be performed in their places of residence outside of the city itself. The descendants of the 1960s immigrants were educated from childhood; and as the generations passed, these people were more and more likely to work in professions requiring an appropriate education. They are known as *coletos* – a term used to describe urban-dwelling Indigenous elites. Spatial conflicts over land and chances to reside in certain areas began to break out, not only between Natives and Mestizos, but also between the new Indigenous migrants and the *coletos*. Most acute tensions may be observed in the Valle de Jovel area. The Mestizos, who are the dominant ethnic group in the population of San Cristóbal de Las Casas, pursued a strategy of drawing clear separation lines from the Natives. This only further reinforced and entrenched the division between districts (or settlements) inhabited by Mestizos (*ladinos*) – regarding themselves as the inheritors of the Spanish tradition – and districts that are home to migrants from Indigenous villages surrounding the city (Rus, 2009, p. 170).

The situation as regards the exclusion of the Native population is well conveyed by the following passage from the 2022 article “La ‘Zona Norte’ de San Cristóbal debe desaparecer” [The North Zone of San Cristóbal Has to Disappear] by Leonardo Toledo Garibaldi:

Each time we speak of the “Northern Zone”, we feed a stigma that discriminates and excludes, a stigma that allows the police to make arbitrary arrests based on prejudice as opposed to dismantling the extensive organised crime networks. This is the same stigma that makes us see any young person on a motorbike as suspicious (as long as that person is not delivering a box to our door, in which case we have no problem sharing with them the exact location of our home). It permits us to speak disparagingly of what we call the “Northern Zone” while sitting at some restaurant in the centre – even though it is Northern Zone inhabitants that serve us food prepared by other Northern Zone inhabitants from raw materials sold by yet other Northern Zone inhabitants, earlier unloaded by other still Northern Zone inhabitants. It makes us blind to the fact that [the Northern Zone] is home to the first person from Chiapas to direct a full-length documentary and the first Chiapas woman to have her art displayed in galleries around the country and worldwide, to the fact that just like in the other parts of the city, its residents include academics, artists, legitimate businesspeople, hard-working students, activists, defenders of human rights, professionals of all kinds, and – above all – workers, many people who leave for work very early and return late at night. But we fail to name all of them when we stop at saying “Northern Zone”, because by using that phrase, we feed a stigma and a stereotype (Toledo Garibaldi, 2022; own translation).

Seeking to improve the region’s economic situation, the municipal authorities focused the local policy on developing tourism. The year 2003 saw the city entered on the list of Mexico’s particularly attractive localities, so-called *Pueblos Mágicos*. The programme, initiated in 2001, is aimed at promoting tourism in places with a real potential to bring in visitors. The list comprises localities less renowned than the large and familiar coastal resort towns and historical centres. However, for Indigenous people (and especially Indigenous peddlers), the inclusion of San Cristóbal on the list resulted in a ban on their activity within the area of highest tourist traffic. Consequently, the city became divided into three major functional districts: Guadalupe (the main tourist zone for Europeans), Carmen (a zone of economic activity for the residents of Tuxtla Gutiérrez), and Santo Domingo (with its craft market and a prevalence of the Native population). This spatial structure reflects the intra-city relations rooted in struggle for domination and discrimination (Chi Aguilar et al., 2019, p. 118). It aggravates the social and spatial exclusion experienced by the Natives, given that it only further reinforces peddling as their main source of livelihood. The plans to organise public space have consequently served to exacerbate the tensions between the political elites and the Native population.

San Cristóbal de Las Casas is thus witnessing an active reproduction of discriminatory practices against Indigenous peoples. These include, as indicated by R. Chi Aguilar et al. (2019, p. 113), exclusion from public space and

stigmatisation that particularly affects young street vendors. In their view, the blame for discrimination against the Native population lies with the municipal officials and the city authorities.

The population of immigrants from rural areas has a varied age structure. Most of the itinerant vendors in the informal sector are young people, in particular children. Members of Indigenous communities, despite formally having a constitutional guarantee of the right to education, do not enrol their offspring in school. Small children are expected to work, contributing to the overall family budget. In February 2024, a group of local children was interviewed, asked about the scope of their obligations and time spent in the streets. As it turns out, they spend much of the day, from the morning through to the afternoon, on selling handicrafts. At times, they are accompanied by adults, but most often they work unsupervised. When asked if they attend school, they answer in the negative. Their mothers and grandmothers, when asked the same question, sometimes try to wriggle out of answering by saying that at least their children go to school in the afternoon. However, this is rather hard to believe, given that the interviews were mostly carried out around 5 pm.

In 2011, the city authorities introduced a ban on itinerant trade in the city centre, which effectively came to be abandoned by some 2,800 street vendors. The local government argued that the decision was motivated by efforts to create “a good image for the city” and thus attract more tourists (Melel Xojobal, 2012, p. 22). The ban was enforced through the imposition of very strict sanitary rules, with the authorities accusing street sellers of littering and generally polluting the streets in the centre, thus disrespecting cultural heritage (Chi Aguilar et al., 2019). Officials and shop-owners were of one mind in arguing that illegal commerce in the streets not only failed to bring the city any additional funds (given that the unregulated vendors paid no taxes) but also contributed to criminal activities such as the sale of narcotics (Silva Londoño, 2010, pp. 195, 196, 199).

The above instances are examples of discriminatory attitudes and behaviour against a selected group of inhabitants which constitute a limiting factor for “the right to the city”. Cultural models in which one group is discriminated against by another are, in fact, deeply rooted in the traditions of the discussed area. Today, these biases are expressed most vocally against street sellers or peddlers. Still, the prejudice against the impoverished Indigenous population on the part of Mestizos stands in violation of the fundamental rights and freedoms that the Constitution of Mexico purportedly guarantees (Rodríguez Zepeda, 2006, p. 26). It was on the basis of similar sociological analysis that Marshall arrived at his definition of discrimination, expressed as patterns of submission and abuse linked with the struggle for power and privilege (Marshall, 1998, cited in Horbath, 2007, p. 43).

There is little or no dialogue or proactive collective action among those who fall victim to inequality and social exclusion, as they, in fact, generally lack strong interpersonal ties, let alone ties with other groups in society, with the immediate natural surroundings – providing ecological and environmental comforts – or with the built environment – offering human-made satisfiers (Hernández González 2020, p. 556; own translation).

Interviews conducted with women from San Cristóbal de Las Casas working in the informal sector show that:

- all household members – including children – have to work;
- the income brought in by children makes an important contribution to the family budget;
- the authorities do not strive to ensure that children go to school, while parents are not interested in sending them there (as one woman saw it – since she herself did not know how to read or write, why should her child need to be able to do that either? It was more important that the kid knew how to earn money);
- small children ostensibly work unsupervised, though they stay in sight of their mothers or older siblings who are also street vendors;
- the police do attempt to intervene gently when the children are too pushy and seem to be harassing tourists;
- a certain group of street sellers works with the quiet acquiescence of the police, with some unofficially admitting that they had to bribe officers for this purpose (however, in most such cases they are residents of the city centre, not the outskirts).



Figure 3. Francisco F. Madero Street, Barrio de Guadalupe, historic centre of San Cristóbal de las Casas

Author: Andrzej Czerny

5. Conclusions

The statistical data presented above has led us to the conclusion that the city of San Cristóbal de Las Casas is characterised by far-reaching socio-spatial polarisation. This is in particular confirmed in the dataset developed on the basis of population censuses.

The presence of the informal sector in the centre of the city, in the tourist zone, has been largely curbed since the authorities decided to remove peddlers from the historic districts. This is not to say that such commercial activity is non-existent, as it is in fact present – as well as tolerated.

The peripheral districts are afflicted by a high unemployment rate, as the interviews conducted make plain. Many members of Indigenous communities residing in the centre or its vicinity do not venture out into the areas on the outskirts of the city. The peripheral districts remain in control of organised groups which often have links to the drug trade. Once night has fallen, outsiders (up to and including taxi drivers and doctors) refrain from entering these areas.

The daily press informs readers of acts of violence perpetrated against Indigenous people, as well as murders of leading figures in movements seeking to represent their interests. In 2023, for example, the Northern Zone of San Cristóbal de Las Casas witnessed the assassination of Martín Palé Santiz, leader of an environmental organisation called Comach, or the *Coordinadora de Organizaciones por el Medio Ambiente-Por un Chiapas Mejor* [Coordinating Committee of Organisations for the Environment – For Better Chiapas]. Two hired guns reportedly arrived on a motorbike in the high-altitude district of Primero de Enero and shot the victim (Mandujano, 2023).

Socio-spatial segregation results in the exclusion of certain groups of people from particular spaces. This is true of the Native Mexicans from San Cristóbal, who are effectively stripped of the freedom to make use of the entire urban space. It also affects the Mestizos, who often feel disinclined to rove across the whole city, given their security-related fears.

Segregation also manifests itself in discrimination against – and the marginalisation of – Indigenous people, especially if they do not speak Spanish.

State institutions prove to be weak and inactive in many spheres. This results in the Natives lacking access to essential services, even to such fundamental rights as education, which in theory is guaranteed by the constitution.

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ABSTRACT**San Cristóbal de Las Casas – policy-induced spatial segregation and ethnic differentiation**

A characteristic feature of Latin American cities is a high degree of social polarisation. Social differences do not result only from unequal distribution of income; they also constitute an element of discrimination and segregation of the Indigenous population, the origins of which can be traced back to the colonial times. The aim of this text is to analyse the socio-spatial structure and its origins in the city of San Cristobal de Las Casas in southern Mexico. The city is located in a region where to this day a large part of the inhabitants are Indigenous people. For centuries, the Indigenous population has been marginalised and relegated to the outskirts of the city. One of the strategies it uses to defend itself is to deny access to external actors responsible for urban policy. At the same time, the authorities' efforts do not help to effectively include the Indigenous residents in the overall urban community.

Keywords: spatial segregation, marginalisation of Indigenous people, ethnic separation, San Cristóbal de Las Casas, Mexico

URBAN STREET MARKETS: URBAN POLICIES, CONVIVIALITY, AND DEVELOPMENT IN CURITIBA AND WARSAW

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1. Introduction

Prospects for urban development inherently seek a dynamic equilibrium between socioeconomic activities, anchored by the principle that the environment must adequately support human endeavors (Costa Filho & Sattler, 1999). This perspective eventually emerges at the microscale, within territories where both intra- and extra-organizational relationships unfold. These relationships lead to productive arrangements, as viewed through the lens of ecosocioeconomy intertwined with sociopolitical processes. Such configurations are amplified by socioeconomic initiatives that accentuate local human competencies, affective aspects, traditions, and ties intrinsic to territorial dynamics. These dynamics promote diverse social practices that extend beyond mere economic interests, advocating for a more judicious utilization of natural resources (Sampaio, 2010) and local social capital.

From this perspective, inter-organizational arrangements often emerge through material and symbolic exchanges between small formal and informal enterprises. These productive units play a pivotal role in stimulating job creation and income generation within urban cores, and many of them lie outside the realm of the traditional market economy. Such enterprises typically fall under public authority regulation when establishing ties with other private entities within the same territory. This regulatory oversight and the legitimization of these arrangements arise from mutual understanding among the stakeholders, taking into account both the micro-complexity of the targeted territory and the macro-complexity of broader contexts in which they operate (Procopiuck et al., 2022).

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In the process of shaping territories based on the extra-organizational dimension of articulation among these productive units, economic activities play a pivotal role for urban evolution, enhancing social and cultural dynamics through forging intra- and inter-organizational relationships. While certain activities, such as local commerce, exhibit stability over the years, others undergo notable transformations. These may be exemplified by the shift from street commerce to malls or commercial centers. Concurrently, novel opportunities for economic engagement emerge in residential areas, public thoroughfares, and recreational spaces. Given these shifts in economic dynamics and urban space use, urban managers confront the challenge of crafting innovative solutions geared towards more inclusive and balanced urban development (Freder et al., 2017), as seen, for example, in the rise of urban street markets.

This study focuses on Warsaw, Poland, and Curitiba, Brazil, as empirical cases helping understand the behavior of agents and institutions in intra- and inter-organizational relationships within urban street markets from an ecosocioeconomic perspective. Warsaw stands out as an example of an environment where socioeconomic dynamics stem from a recently dismantled closed socialist system. In contrast, Curitiba has evolved within a capitalist system characterized by a wave of democratization in its recent history. The analysis of these two cities aims to decipher the role and structure of urban street markets within local socio-productive arrangements, considering both the regulations imposed by public authorities and the self-regulation adopted by the vendors.

2. Theoretical-conceptual pillars

This section illuminates the perspectives for conceptualizing ecosocioeconomy, which allows for formulating a more integrated and sustainable approach to development. It extends beyond traditional economic value by capturing the richness and depth inherent to micro-societies. In this context, urban street markets are recognized as sales venues and epicenters of culture, identity, and community relationships. Ecosocioeconomy acknowledges the significance of these interactions, championing a development strategy that balances economic growth with social well-being and environmental conservation. Such a perspective paves the way for more equitable, sustainable solutions anchored in local foundations, thereby expanding the understanding of urban economics.

2.1. Ecosocioeconomy: a novel analytical lens

Ecosocioeconomy constitutes a multidimensional concept elucidating the interactions between the domains of ecology, society, and economy. It aims to understand how these realms intertwine and influence one another through

everyday experiences, particularly in micro-territories. Using this perspective, it is possible to discern the role of urban street markets, which, beyond being commercial exchange spaces, also serve as sites for fostering community bonds and cultural identities. Ecosocioeconomy extends its observation beyond traditional economic value to encompass the formation and significance of micro-societies where social, affective, and symbolic relationships are nurtured. Consequently, this approach may illuminate pathways for policies and regulations imbued with heightened sensitivity to local sociopolitical nuances, acknowledging and valorizing the complexity of such interactions, thereby fostering more harmonious and sustainable development within urban contexts (Procopiuck et al., 2021, 2022).

The ecosocioeconomic approach gained prominence primarily thanks to the influential contributions of Polish economist Ignacy Sachs (2007), characterized by innovative action proposals and outlining pathways for more equitable and sustainable development. Interestingly, echoes of this concept can be traced back to studies as early as the 1950s, as evidenced in the proposals of Ciriacy-Wantrup (1952). This researcher seamlessly integrated private conservation economics with the economic dynamics of social conservation, thereby formulating goal definitions and criteria for more effective conservation policies. Resources were divided into two categories: non-renewable (or stock) and renewable (or flow) resources. Central to this conceptual foundation was the temporality of utilizing non-renewable resources linked to their potential depletion, thereby suggesting guidelines for domestic and international policies.

In the subsequent decade, Kenneth Boulding (1966) expanded on these concerns, emphasizing the urgency to address more immediate and potentially more straightforward challenges. He argued that confronting these issues held significance not solely due to their intrinsic value but also as a catalyst for a broader learning trajectory. Addressing these initial challenges could lead us to deeper understanding, subsequently helping us to devise solutions for larger-scale problems. Boulding posited that concentrated mobilization around these immediate issues was paramount, as they would act as a stepping stone to holistic strategies. Engaging with such matters could predispose individuals to delve deeper, benefiting the long-term process of pinpointing and executing sustainable solutions. Hence, acknowledging the significance of these preliminary challenges emerged as a foundational step in the journey to tackle more intricate dilemmas.

Recently, ecosocioeconomic research has intricately woven itself with and benefited from advancements propelled by scholarly work across diverse fields such as policy, sociology, environmental studies, and urban and regional studies. For instance, seminal contributions toward understanding ecosocioeconomy have been made by Sachs (2007) and Sampaio et al. (2008). Likewise, Pecquer (2006) has helped advance discussions on socio-territorial dynamics. Authors like Illich (1973) and Ivan (1976) have delved into embracing a more

human-centric development approach, the notion of ‘conviviality’, advocating for fairer development with an emphasis on natural balance preservation. Organizational and action-oriented perspectives at micro-scales have been addressed by Max-Neef et al. (2012), resonating with contemporary studies that probe urban ecosocioeconomy in settings such as urban street markets, as underscored in the works of Procopiuck et al. (2013, 2022, 2021), Freder et al. (2017), and Freder (2019).

Development trajectories within the realm of ecosocioeconomy are firmly rooted in micro-scale interactions and the balance between economic growth, social well-being, and environmental conservation. The consensus on harmonizing these dimensions is evident, especially when addressing challenges like sustainable economic expansion, inequality reduction, and finite resource management. However, economic policies often emphasize the productive capacity of traditional industries, overlooking micro-scale processes and prioritizing tangible outcomes. Consequently, valuing local development driven by micro-organizations operating under socio-environmentally friendly principles and values becomes strategic in this landscape. Such relationships manifest through arrangements that might be inter-organizational, namely consisting in interactions between organizations, or extra-organizational, which refers to organizational relationships within their specific territory. Moreover, these interactions foster unique territorial dynamics, ensuring that problems and solutions are locally addressed through these organizational arrangements (Sampaio, 2010).

2.2. Socioproductive dynamics: from local to global

Within the social fabric, two primary organizational modes are discernible: dependency relationships and self-dependency relationships. The former induce domination processes that often impede the fulfilment of human needs as they operate vertically, transitioning from the macro- to the micro-context and from the broader social spectrum to the individual. In contrast, self-dependency relationships engender synergistic and multiplicative effects. These relationships manifest from the bottom-up, moving from the micro- to the macro-scale, transitioning from local to regional and subsequently to national levels. Such dynamics align with economic growth objectives, social justice, personal development, and freedom, ultimately fulfilling individual and societal essential human needs (Max-Neef et al., 2012).

In this way, analytical strategies focused on assessing urban policies across both vertical and horizontal dimensions emerge as crucial to understanding the roles of public entities, private organizations, and third-sector institutions in policy formulation and execution at various levels (Procopiuck & Freder, 2020). Within this framework, one can discern, for instance, how ecosocio-economic arrangement models act as catalysts for sociopolitical processes in producing goods and services of societal interest. These processes are driven

by socioeconomic actions prioritizing local human skills and reviving the affective, traditional, and relational features inherent to territorial dynamics. Such processes spur various social practices, extending beyond sheer economic interests and fostering a more conscious and sustainable use of natural resources (Sampaio, 2010).

Interorganizational arrangements, even when institutionalized in broader contexts, play a pivotal role at the micro-level by stimulating job creation and augmenting income in urban areas, often marginalized from the conventional economy. Such configurations, interfacing with local private entities, are subject to state regulation and need to align with many sociocultural values that shape and underpin given territories. This derives from a mutual understanding among actors, considering both micro- and macro-complexities (Sampaio, 2010). Urban street markets epitomize this dynamic, operating within the inter-organizational realm. Such ventures exemplify the incessant interaction between local private and public sectors, ensuring proper regulation and efficient daily operations in urban territories.

Urban street markets produce socio-productive arrangements which are established as inter-organizational sets of collectively executed activities. This configuration facilitates the operation of micro-enterprises, regardless of their formalization status, exerting an impact on the socio-spatial organization and identity within the urban context (Procopiuck et al., 2017). In light of this, the current study adopts this definition of “socio-productive arrangement”, which now steers the selected theoretical scope.

2.3. The microcosm of urban street markets: cultural mirrors of societies

Extra-organizational arrangements evolve from inter-organizational setups and inherently correlate with the territory in which they take place, leading to the production of socio-productive arrangements discernible across various scales. Within this realm, socio-political accords, socio-productive agreements, and the generation of social capital become manifest (Sampaio, 2010). In the extra-organizational domain, the commercial activity of urban street markets, through interactions with public authorities and the local market, establishes connections and influences the territory in manifold ways. This influence ranges from social relations and coexistence norms to economic interactions between competing merchants within the vendors’ product niche.

Urban street markets engage with the territory on the micro-scale. They can be described as micro-organizations of family activities that offer complementary functions in urban settings (Grimm et al., 2016b). Research by Vasques (2016) and Gomes et al. (2013) provides insights into such markets’ socioeconomic attributes and labor relationships. They align with territorial identities, representing productive specializations integrated into local markets due to their small-scale production. This also facilitates their dissemination on a larger scale (Freder et al., 2018).

Urban street markets play a pivotal role in local development and in forging territorial ties. Governed by their unique internal logic, they exhibit organizational resilience within cities over time. Collective autonomy transforms them into hubs reflecting and representing the lives of their patrons. They serve as multifaceted exemplars of territorial organization and, through daily interactions, evolve into sociological phenomena within an ecosocioeconomic framework which encompasses a variety of occupations, some precarious, ranging from merchants to suppliers. However, their functioning surpasses mere “survival informality”, a concept associated with specific occupations and disconnected from the loss of formal employment (Moura Junior, 2010), emerging instead as the foundation for contemporary urban innovation (Center for an Urban Future, 2010).

Urban street markets foster sustainable territorial development across various urban areas. These organizational forms are deeply embedded within the daily urban fabric, addressing local demands and housing many micro-organizations that operate and interact in specific territories. They support the needs of diverse communities, such as those seeking cultural products or organic goods. They establish institutional arrangements in the territory, often filling gaps unaddressed by the conventional market. Furthermore, these entities typically function according to their distinct regulations and organizational structures (Procopiuck et al., 2021).

3. Navigating the research: methodological approach

The methodological approach employed in this study is primarily qualitative, encompassing data collection from diverse sources. Subsequently, the data undergo triangulation, incorporating descriptive statistics and documentary analysis. Questionnaires were completed by 334 vendors at urban street markets in Curitiba and 233 in Warsaw, and interviews were conducted with three public administrators. Two core thematic axes were defined: “urban commercial activities” and “ecosocioeconomy”. These axes were further divided into three analytical categories: “internal relational configuration in the urban fair”, “inter-organizational arrangements”, and “extra-organizational arrangements”. The research of the urban street markets between 2016 and 2018 was based on three analytical frameworks. The first regards these markets as spaces characterized by various arrangements; the second emphasizes the vendors’ role as both commercial and social actors; and the third evaluates the function of these spaces’ managers within the cities’ contexts. This methodological design comprehensively explores the multifaceted dynamics within urban street markets in Curitiba and Warsaw.

The choice of Curitiba and Warsaw as the study’s focal points resulted from their shared and contrasting characteristics. They exhibit similarities in the spatial distribution of the market and socioeconomic and demographic

indicators. Notably, both cities have a population of approximately 1.8 million, with their primary municipal revenue sources rooted in the commerce and services sectors. However, they diverge in public policies and regulatory frameworks governing commercial activities in urban street markets. Still, both Curitiba and Warsaw cultivate this commercial tradition, with their markets offering various product categories, including fruits, vegetables, and agricultural produce. This comparative study provides valuable insights into the nuances of urban street markets within different urban contexts, shedding light on the impact of local urban policies and regulatory frameworks on these essential urban institutions.

4. Results: unveiling scenarios

This section provides a comprehensive analysis of urban street markets, considering them as true microcosms of cities. It sheds light on significant aspects of the historical and contemporary status of these spaces in Brazil and Poland. From their origins tied to colonial influence to modern-day adaptations, Brazilian markets, exemplified by Caruaru and Ver-o-Peso, illuminate the country's cultural and commercial dynamics. And in Poland, despite political and economic fluctuations, there is still an appreciation for sustainable and traditional products sold in street markets.

4.1. Brazil and Poland: parallel narratives of urban street markets

Historically, urban street markets have been present in Brazil since the era of Portuguese colonial influence (Almeida, 2009), with the first such market documented in São Paulo in 1687. They have played a pivotal role in urban supply and have experienced national expansion (Godoy, 2005). They have evolved over time, particularly in terms of the types of merchandise in circulation and the community cohesion (Tavares, 2005). However, they continue to stand as emblematic elements of the urban landscape. Certain urban street markets have undergone reinvention in order to align with contemporary contexts, such as the Caruaru Fair, the Ver-o-Peso Fair (Erimar Santos, 2013), and the Largo da Ordem Fair, mirroring current demands and adapting to local market dynamics.

However, the persistence of urban markets is not noticeable solely in Brazil. Following Poland's political and economic transformations in 1989, street markets – traditionally a staple of the European landscape – have withstood the socioeconomic challenges. They are frequently venues for trade in products from traditional agricultural farms, maintaining popularity despite the ubiquity of supermarkets. Many of such commodities, including wild fruits and mushrooms, derive from smallholdings and undergo sustainable extraction (Kasper-Pakosz et al., 2016). Direct sales to consumers remain popular (Wawryszuk & Gołębiewski, 2014), which suggests that the proximity of

urban street markets in residential neighborhoods plays a pivotal role, less for attracting and retaining customers and more for meeting city dwellers' cultural and environmental needs.

4.2. Curitiba: a reflection of immigration and territorialized exchanges in urban streets

The development of urban street markets in Curitiba is intrinsically linked to the history of European immigration to the town in the second half of the nineteenth century, driven by Paraná's political emancipation in 1854 (Prefeitura Municipal de Curitiba, 2018). German, Polish, and Italian immigrants settled on the city's outskirts and started to sell horticultural products from carts, a practice which gradually evolved into current urban markets (Prefeitura Municipal de Curitiba, 2016). These origins significantly shaped the socio-spatial organization of markets in the city (Freder et al., 2017).

The period between 2016 and 2018 saw the consolidation of a strategic network of 41 markets distributed throughout the city, operating in different shifts to meet the specific needs of each neighborhood (Prefeitura Municipal de Curitiba, 2016). This spatial and temporal spread reflects the efforts to adapt to contemporary urban dynamics (Freder, 2019) while preserving traditional commercial practices. The significant trading volume in urban markets – approximately 900 tons of food per six months – evidences their importance in the urban supply chain (Prefeitura Municipal de Curitiba, 2016; Procopiuck et al., 2022).

The governance structure of Curitiba's markets represents a distinctive hybrid model, as Procopiuck et al. (2022) have demonstrated. Although operating under municipal regulations, their management involves different entities with direct vendor participation (Freder, 2019). The markets are categorized and supervised according to their specialization: those focused on food products and gastronomy are managed by the Municipal Supply Secretariat, while crafts, art, and antiques are under the responsibility of the Municipal Tourism Institute (Grimm et al., 2016a). This administrative segmentation demonstrates an approach that recognizes and addresses the specificities of each type of market (Procopiuck et al., 2022).

The commercial composition of the markets reflects both historical traditions and contemporary adaptations, as Procopiuck et al. (2022) have observed. Approximately 60% of transactions involve fruits and vegetables, maintaining their original food supply function. The remaining share has diversified to include artisanal products, preserves, seasonings, haberdashery, and seeds, demonstrating the vendors' capacity to adapt to contemporary urban demands (Freder, 2019; Procopiuck et al., 2022). This diversification and the maintenance of traditional practices exemplify how markets in Curitiba balance cultural heritage and commercial innovation.

The functioning of Curitiba's markets is an example of an urban management model that successfully reconciles formal regulation with operational flexibility (Procopiuck et al., 2022), allowing markets to maintain cultural authenticity while adapting to contemporary needs. The segmented administrative structure, coupled with vendors' active participation in management, has created an environment that favors both the preservation of traditional practices and commercial innovation (Procopiuck et al., 2017; Sampaio, 2010), constituting a valuable example of how traditional urban institutions can adapt without losing their cultural and social essence.

4.3. Warsaw: balancing tradition and modernity in the city streets

In Warsaw, contemporary debates have centered around reinterpreting street markets and bazaars in light of urban changes. Discussions have arisen regarding their potential decline, eliciting varying reactions among residents. After enduring wars, communist regimes, and the proliferation of hypermarkets, a question emerges: are these urban street markets now susceptible to gentrification? For instance, the Wolumen Market in the Bielany district faces urban redevelopment proposals that jeopardize its continued existence. In retaliation, vendors have mobilized in its defense. One strategy, championed by the deputy mayor of the district, advocated for the street market's designation as a cultural heritage site to ensure its conservation (Woś, 2018). This scenario highlights the ecosocioeconomic dynamics existing in urban settings, underscoring the tension between preserving tradition and accommodating contemporary urban growth.

The Wolumen Market case exemplifies a broader pattern of gentrification pressures affecting urban street markets in both cities under analysis. In Curitiba, similar tensions exist between traditional market spaces and urban development, though they are managed differently through municipal policies. These contrasting approaches to market preservation amid urban renewal highlight a critical challenge: balancing modernization with protecting cultural and economic spaces that serve local communities. The experiences in both cities demonstrate that successful preservation of street markets requires active policy intervention and community engagement.

Urban street markets in Warsaw have undergone profound transformations in recent decades. These shifts have become particularly evident since 1989, driven by sweeping political, constitutional, and economic reforms at both macro- and micro-levels. Furthermore, the agricultural landscape in Poland experienced significant changes, especially after the country's accession to the European Union in 2004. The EU membership necessitated adaptations to conform to European standards and requirements. Consequently, there was a noticeable increase in agricultural production, leading to domestic and international sales of agricultural products (Wesołowska, 2012, p. 21).

This progression underscores the intricate interplay of ecosocioeconomic dynamics within the urban and agricultural sectors, further highlighting the profound impact of regional affiliations on local practices and outcomes. It exemplifies the multifaceted relationship between urban street markets, economic structures, and broader policy frameworks.

Until the early 1990s, the majority of urban street markets were informal. However, significant transformations took place between 1992 and 1993. The functioning of the markets was systematized with regulatory standards setting specific days, operational locations, and criteria for exhibitors (Klima & Zajackowski, 2008). By 1993, novel informal commercial dynamics manifested in street markets, integrating them seamlessly with traditional public markets. While historically, these markets predominantly featured fruits, vegetables, and used goods, this integration ushered in a range of industrialized products, thus modifying the nature of street commerce (Witkowski, 1993). This shift reflects the intricate interplay characterizing urban markets, highlighting their adaptation and evolution in response to changing socio-political landscapes (Bareja-Wawryszuk & Gołębiewski, 2014).

In an evolving economic landscape, products from the West became widely accessible, often sold from makeshift stalls in spaces such as streets, squares, and vehicles. The foreign goods available for purchase included food, electronics, toys, and media, mirroring what Santos (2008 [1979]) identifies as the lower circuit of urban economy commerce. Concurrently, there was an emergence of businesses, particularly importers and wholesalers. Their ranks were typically formed by numerous street vendors, often those unemployed, taking advantage of non-traditional distribution channels. This proclivity bolstered informal retail, swiftly positioning goods in high-consumer traffic zones (Witkowski, 1993). These dynamics underscore the adaptability and resilience of informal market systems in navigating the complexity of a transitioning urban environment (Kasper-Pakosz et al., 2016). The above adaptation speaks to the multifaceted nature of urban street markets as they respond to shifts in economic structures, consumer behavior, and global influences, highlighting their role as flexible and agile agents in urban economies.

In 1991, local regulations strategically relocated street vendors to underground galleries and areas adjacent to the historic center. This shift in commercial dynamics posed challenges for the populace: many had to swiftly adapt to a transformed marketplace and become adept in price comparison and quality evaluation. In this emergent economic environment, being able to discern between goods worthy and unworthy of purchasing became of paramount importance. Understandably, this transition did not garner uniform acceptance from specific groups, such as rural inhabitants, older individuals, and specific socioeconomic groups. They were dissatisfied with the revised context of their activity (Witkowski, 1993). Such developments exemplify the intricate interactions and adaptations within urban management transitions.

5. Discussion and reflections: engaging with the findings

The research identified five distinctive elements in the urban street markets of Curitiba and Warsaw: similar education levels among vendors, familial engagement, reliance on the generated income, competition, and contemporary regulations. However, Curitiba exhibits more sophisticated governance and greater government support. The socioeconomic profiles of the vendors in the two cities diverge, influencing support, security, and collaboration. Markets in both settings operate as hybrid ventures, fostering interdependent networks. They are pivotal venues for urban commerce, driving the economy and facilitating social interactions distinct from conventional trade.

The findings regarding urban management shed light on a customized regulatory framework underpinning this distinct commercial modality characterized by its collective and territorial engagement. Moreover, the community networks that have organically evolved around urban street markets serve to strengthen bonds among vendors, consumers, and residents. The interaction of these groups, particularly conspicuous in Curitiba and spanning multiple territorial domains, attests to the robust social fabric woven within these urban spaces. In summary, while street markets may ostensibly present themselves as micro-societies intricately intertwined with the broader market economy, they exhibit multifaceted dynamics that exert a tangible and transformative influence on the territories in which they are embedded.

An analysis and extensive on-site exploration have revealed a rich tapestry of urban street markets in both cities. Such venues can be classified into a spectrum of categories, ranging from fruit and vegetable markets, fish markets, art exhibitions, markets specializing in handicrafts or manufactured goods to those dedicated to trading in pre-owned items and holding celebratory gatherings. It is crucial to underscore that all these various types of urban street markets coexist in both Curitiba and Warsaw. In both cities, we will find permanent and mobile markets dedicated to conventional merchandise, organic produce, and artisanal gastronomy. This extraordinary diversity paints a dynamic urban landscape blending diverse economic, cultural, and environmental threads, presenting an intricate tableau of sustainable urban commerce.

The variables for studying the internal relational configuration of urban street markets, or their intraorganizational dimension, were developed on the foundation of various theoretical perspectives. These emphasize that urban markets typically feature small-scale activities, with individual vendors or families producing or selling small volumes of goods, as highlighted by Santos (2008 [1979]). Max-Neef et al. (2012) argue that such initiatives are micro-scale enterprises that aggregate a significant portion of the workforce. Additionally, they function as distribution channels, aligned with models like bulk sales outlets. Urban street markets display certain unique characteristics, such as personalized customer service and price negotiation.

Certain contrasts between Warsaw and Curitiba emerged when examining the behavior of agents overseeing urban street markets. In Warsaw, the attempts to schedule interviews were met with clear resistance, and the urban managers appeared hesitant to discuss specific topics, such as technology adoption or details of labor relations. Market vendors in the Polish capital sign contracts directly with landowners, which may be individual entities or associations, with the latter accountable for space management. In contrast, the experience in Curitiba proved more accommodating: interviews were scheduled and executed without complications. Although local urban authorities in Curitiba recognize the need for innovations at urban street markets, they stress preserving their traditional essence. Street markets are organized in Curitiba's public spaces yet operate under the regulations and controls set by the municipality.

In case of both cities, an apparent increase in vendor formalization can be observed, though this trend presents complex implications for market dynamics. While managers acknowledge this shift, they lack comprehensive data on its extent and impact on employment patterns. Their focus remains primarily on regulation and fee collection, with limited attention to labor relations and the informal economy's dynamics. This oversight may stem from the prevalence of family-based operations in these markets. Still, it highlights the need for more detailed research on how formalization affects these traditional family-centered business structures and the broader informal economy within urban street markets.

The study aimed to demonstrate how the public management structure of urban street markets impacts vendors in a regulated environment and analyze how they self-regulate their own activity. The majority perceives the current regulations as clear and adequate. However, while many appreciate municipal support in Curitiba, some view the norms as excessively stringent. In Warsaw, few consider the regulations strict, but there was a high number of non-respondents, particularly among immigrants and vendors in irregular situations, which may suggest that they are somewhat apprehensive about expressing their views. The data collected underscore the importance of regulatory flexibility and sensitivity to the specificities of vendors.

The analysis of self-regulation observed in both cities showed that most vendors operate independently and, even when aware of associations or unions, choose not to affiliate with them. It was also highlighted that many do not have access to channels for expressing their opinions about the markets at which they sell. In Curitiba, a significant percentage of vendors acknowledges the existence of representative organizations. They mainly communicate through WhatsApp groups or local associations. In Warsaw, in turn, the majority of market sellers is unaware of such entities, although it needs to be emphasized that this question was left unanswered in many of the distributed questionnaires.

The research results obtained through examining the urban street markets in both cities align with the theoretical framework adopted for this study and

concerning intra-, inter-, and extra-organizational dynamics. However, it is worth emphasizing the importance of contractual formality and the formalization of vendors' businesses, as observed in the interviews. This finding invites reflection on the types of occupation fostered in urban street markets and their relationship with the informal economy, as discussed by Moura Junior (2010). Although the vendors in the markets typically fall into the realm of informal economy, this state of affairs does not imply that formal occupations are somehow devalued. The activities in urban street markets have specific features that align with the concept of micro-scale activities as defined by Max-Neef et al. (2012), in which many individuals aim at income generation.

The continuity of urban street markets seems unthreatened thanks to such factors as their economic importance and their role in the formation of local identities. Despite the presence of various businesses in neighborhoods, urban street markets offer an added value to the local commercial landscape, especially if they focus on the trade in fruits and vegetables, influencing price regulation and supply. The value of markets extends beyond mere supply; in line with the concept of micro-societies and self-reliance outlined by Max-Neef et al. (2012), they provide cohesion and constitute the identities of individuals and organizational forms that operate within them. The environment of an urban street market helps foster social, emotional, and symbolic relationships, contributing to developing intra- and extra-organizational arrangements for each analyzed territory, as indicated by Sampaio (2010).

The concept of ecosocioeconomy emphasizes the essence of urban micro-territories, and it manifests itself in the urban street markets of Curitiba and Warsaw. More than mere commercial venues, these markets provide space for scenarios for social interaction and reinforce cultural and community bonds. Interactions between stallholders and consumers intensify, strengthening local identities. These interactions invigorate the economy and enrich the urban cultural landscape. The spaces of urban street markets, imbued with their distinctive character, are part of an inter-organizational network encompassing economic, social, and environmental dimensions. Thus, the markets are cultural epicenters and reflect urban social diversity.

6. Conclusion

Urban street markets in Curitiba and Warsaw emerge as pivotal commercial venues within the urban landscape, offering various goods, from agricultural and non-agricultural products to crafts, art, antiques, and prepared foods. They wield substantial influence over the territories in which they operate, extending beyond economic and financial realms to encompass symbolic value creation. Notably, these markets foster the exchange of knowledge and the cultivation of social interactions, aligning closely with sustainability ideals. They serve as vibrant microcosms at the intersection of social, economic, and

environmental dimensions. Furthermore, they preserve local traditions and customs, reinforce cultural identities, and nurture community. In essence, they are not merely economic entities but also cultural and social hubs that enrich the urban fabric, which underscores their significance in a sustainable urban development.

In both cities studied in this paper, urban street markets emerge as distinctive commercial alternatives to traditional establishments like small shops, supermarkets, and shopping malls. Their uniqueness stems not only from the diversity of products available, but also from the exceptional experiences they offer to consumers, which are made possible by the infusion of cultural elements and the natural environment into the available goods and services. Among these experiences are opportunities for open-air shopping, engaging in direct seller–buyer interactions, price negotiation, personalized customer service by vendors, and access to locally manufactured cultural products. Urban street markets hold a profound symbolic meaning, extending way beyond their economic function. They serve as platforms for collective territorial engagement by vendors or consumers, reinforcing and perpetuating local traditions and customs.

When street vendors gain social and political approval in their local environment, they can prove to be the central element of urban street markets, playing a pivotal role beyond mere commerce. They are vital architects of local trade relationships, wielding influence over the local cultural dynamics. Moreover, their ability to navigate and thrive in a dynamic and highly competitive market is a testament to their adaptability and resilience. Their meticulous selection of goods and cultivation of customer relationships carry profound symbolism and significance. They not only facilitate economic transactions, but also contribute to reinforcing the sociocultural fabric of the urban environment. The vendors' role transcends that of a seller; they become curators of a unique marketplace experience, where every product and interaction is infused with cultural meaning. In essence, vendors emerge as linchpins in the intricate web of urban street markets, shaping not only commerce but also the cultural and social tapestry of the city.

When analyzed from the perspective of ecosocioeconomy, urban street markets, particularly in Curitiba and Warsaw, reveal complex interconnected systems of urban commercial activities and sustainable practices. In the studied cities, the internal relational configuration within the markets manifests itself in dynamic interactions among vendors, products, and consumers, weaving networks of mutual dependence and social cohesion. Simultaneously, inter-organizational arrangements, such as the distinct management bodies in Curitiba, underscore the diversity and specificity of activities taking place at markets, requiring unique knowledge and strategies for their various types. Additionally, extra-organizational arrangements highlight the role of urban street markets in the broader city context, such as their interaction with supermarkets in Poland or their response to cultural and environmental needs. As the study of these dimensions conducted in the period between 2016 and

2018 demonstrates, urban street markets can be seen as more than just markets and serve the community as culturally vibrant, economically productive, and socially significant ecosystems – provided that the public authorities and the local commerce operating under cold market rules approach them from a non-stigmatizing perspective.

Finally, the comparative analysis of Curitiba's and Warsaw's street markets highlights how these spaces navigate contemporary urban challenges, particularly gentrification and formalization pressures. Their resilience and adaptation strategies provide meaningful perspectives for urban policy development, suggesting that successful market preservation requires balancing formal regulation with the protection of traditional market practices and community spaces. Future research should explore how these markets continue to evolve in response to urban development pressures while maintaining their essential role in local communities.

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ABSTRACT

Urban street markets: urban policies, conviviality, and development in Curitiba and Warsaw

Urban street markets, rooted in diverse ways in the urban landscapes of Brazil and Poland, notably in cities like Curitiba and Warsaw, hold pivotal roles in shaping the socioeconomic dynamics. Despite the availability of extensive literature on these complex organizational forms in urban settings, a comprehensive comparative study has been conspicuously absent, especially across diverse cultural contexts. This research delved into urban street markets from 2016 to 2018. It employed a mixed-methods approach, primarily focusing on the markets' internal relational structures, inter-organizational configurations, and external links to broader urban organizations. The findings showed that these sites are vibrant ecosystems, exemplified by the circulation of approximately 900 tons of food biannually in Curitiba and a significant increase in agricultural production directed toward urban markets in Poland, highlighting the intricate interplay among commerce, culture, and sustainability. Furthermore, as observed in Curitiba, diverse governance structures underscored the need for tailored urban management to align with each market's unique characteristics. These urban street fairs transcend their role as mere marketplaces, emerging as ecosocioeconomically productive spaces deeply embedded in their cultural and environmental contexts. While this study offers a comprehensive overview, further research may delve deeper into the individual roles of vendors and their specific contributions within this multifaceted urban landscape.

Keywords: ecosocioeconomy, urban street markets, urban territorial development, cultural identity, urban policy

WATER AS THE KEY LINK BETWEEN ECONOMIC DEVELOPMENT AND SUSTAINABILITY*

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1. Introduction

Water stands as a resource crucial for sustaining the natural ecosystem and fostering societal advancement. Ensuring access to water in sufficient quantity and quality is indispensable and decisive for a dignified and high-quality life. The growing demand for water, both for domestic use and for agricultural and industrial processes, places mounting pressure on this finite and unequally distributed resource, causing problems of scarcity and water stress (Borja & Moraes, 2006; Fracalanza et al., 2013).

Poverty is commonly conceptualized as having income insufficient to meet basic needs, and it is typically measured using a per capita income threshold (Rocha, 2003). However, following the insights of Amartya Sen (1981, 1983, 1985), poverty is now understood as a multifaceted problem involving deprivations that go beyond insufficient monetary resources and hinder full human development.

Therefore, water poverty is defined as the intersection of income and access to clean water. More precisely, it is a multidimensional concept that encompasses a) water availability, measured in terms of quality and quantity of water resources; b) accessibility, referring to physical access conditions; c) the

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socioeconomic dimension, encompassing financial accessibility and the social and economic consequences of water access or its absence.

Monitoring water poverty is particularly crucial in the current context, as climate change has the potential to exacerbate existing inequalities. This is especially relevant at the municipal level, because it is where local communities directly experience the impacts of water scarcity and where solutions must be implemented.

To address these demands, this paper starts by presenting the different roles of water, focusing on its complex nature, especially its dual role as an economic good and a human right. Subsequently, it discusses the Water Poverty Index, originally proposed by Sullivan (2002), and applies it to a set of municipalities located in São Paulo state. The results obtained are then compared to the Human Development Index (HDI) to explore potential correlations.

2. The complex nature of water

Water is an essential resource indispensable for sustaining life, and its significance is reaffirmed in the UN's 2030 Agenda through the sixth Sustainable Development Goal (SDG): "Ensure access to water and sanitation for all" (UN, 2015). Targets 6.1 and 6.2 aim to guarantee universal access to water and sanitation for everyone, without discrimination based on economic, social, cultural, gender, or racial factors. These targets are directly related to the concept of access to water and sanitation as human rights recognized by the UN General Assembly (2010) through Resolution 64/292 of July 2010. In this Resolution, water and sanitation are considered essential for realizing all human rights, reinforcing what was earlier stated by the Committee on Economic, Social and Cultural Rights in General Comment No. 15 of 2002 (CESCR, 2002).

Target 6.4, on the other hand, established a link between water-use efficiency of different economic sectors and the issue of water scarcity. It recognizes the relevant role of water in economic development while addressing challenges that arise when its use is constrained by scarcity.

SDG 6 reflects the complexity related to fresh water and its management, especially when attempting to categorize its nature as either an economic good or a fundamental human right.

Since the Dublin Statement on Water and Sustainable Development of 1992 (WMO, 1992), fresh water is acknowledged as "a finite and vulnerable resource, essential to sustain life, development and the environment" (Principle 1). Released at the end of the International Conference on Water and the Environment, it is the first official document to recognize water as an economic good (Principle 4). It emphasizes the significance of pricing water to discourage wasteful and environmentally harmful practices, a recognition driven by understanding water's finite nature and the competition between different actors seeking to use it.

Water scarcity is a complex issue that arises from a combination of natural factors and social dynamics. While natural conditions like climate, geography, and precipitation patterns contribute to the availability of water, human activities and societal structures play a significant role in exacerbating or mitigating water scarcity. Population growth, inefficient water use, pollution, inadequate infrastructure, and unequal distribution of water resources are some of the social elements that contribute to the emergence of water scarcity as a problem.

The Dublin Statement and the 2030 Agenda underscore the need for an integrated approach to address this pressing challenge.

Ensuring the sustainable use of freshwater is essential, and effective water management emerges as a key tool in achieving this goal. This involves a thoughtful consideration of factors like the availability of water, its quality, patterns of water usage, and the environmental pressures it faces.

There is an urgent need to establish a sustainable approach for improving water management and understanding the intricacies associated with water issues. This involves integrating considerations across physical, social, economic, and environmental dimensions.

3. The Water Poverty Index

Sustainable management of water resources is exemplified by policy-making aiming to mitigate inefficiencies in water allocation and distribution in line with the principles of sustainable development. This management approach spans from addressing challenges related to the availability of this natural resource, such as over-exploitation, degradation of water sources, and the impacts of climate change, to ensuring access for end-users with adequate water supply and sanitation services. In other words, a holistic perspective of sustainability guiding water resource management emphasizes the importance of appreciating the impacts of inadequate services on the environment and human well-being. These repercussions carry economic and social consequences, influencing work productivity and contributing to the rise and exacerbation of social inequalities.

The establishment of public policies aimed at ensuring universal access to clean water can bring about structural changes that enhance the well-being of the most vulnerable populations, thus making a significant contribution to sustainable development (Neves-Silva & Heller, 2016). Among the challenges within water resource management, Castro (2016) lists the need to develop a system that is environmentally and socially sustainable as well as economically viable.

In an indicator-based management framework adopted to guide decision-making, the Water Poverty Index (WPI), originally proposed by Sullivan (2002), plays a crucial role. It allows for assessing progress toward universal access to water through a relatively simple and cost-effective methodology, relying on secondary data and producing easily communicable results.

WPI proposed by Sullivan (2002; Lawrence et al., 2002; Sullivan et al., 2002) remains the most relevant and widely used version of such index in academic publications (Cho & Ogwang, 2014).

WPI is a tool that combines information on water availability and accessibility with socioeconomic data. It was designed to provide a systematic and structured approach to assessing and identifying priorities in water resource management. The index considers both physical and socio-economic factors, making it a multidisciplinary and multidimensional measure (Gonçalves, 2013).

According to Sullivan and Meigh (2003, p. 114), WPI includes five components:

1. Resources – this component measures the availability and reliability of water resources. It includes water quantity and quality indicators;
2. Access – this component evaluates the adequacy of current arrangements for water supply and sanitation, covering domestic use and irrigated agriculture;
3. Capacity – this dimension assesses the ability to manage water resources, considering factors such as education, health, and access to financial resources;
4. Use – this component analyses how water is utilized across domestic, agricultural, and industrial uses and how it contributes to the overall economy;
5. Environment – this component addresses the environmental consequences of water management to preserve long-term ecological integrity.

WPI was initially calculated at the world level, comparing 149 countries. However, since its publication, it has been used to assess water poverty in cities, watersheds, countries, or groups of countries (Jaren & Mondal, 2021; Jemmali & Sullivan, 2021; Chen et al., 2020; Guimarães & Ferreira, 2020; Senna et al., 2019; Huang et al., 2017; Gonçalves, 2013; Pérez-Fouquet & Garriga, 2011; Sullivan et al., 2003, 2006). Respecting its ultimate purpose of assisting policymakers in prioritizing investments according to the relative classification of local water poverty, the application of WPI must be adapted, especially in the choice of variables, to be suitable for a given research location.

4. The watersheds of the Piracicaba, Capivari, and Jundiá rivers

In this paper, WPI is applied to the municipalities within the Piracicaba, Capivari, and Jundiá (PCJ) watersheds (Figure 1).

The PCJ watersheds encompass 71 municipalities in the state of São Paulo (SP) and 5 in the state of Minas Gerais (MG). Although they cover only 0.18% of Brazil's land area, they are home to approximately six million predominantly urban inhabitants, making up around 3.3% of Brazil's population in 2022 (IBGE, 2022). These regions also significantly contribute to the country's economy, accounting for 7% of its GDP (IBGE, 2020).

These municipalities display a considerably high Human Development Index (HDI), with scores ranging from 0.661 for the municipality of Toledo (MG) to 0.854 for Águas de São Pedro (SP) (ABPCJ, 2020). However, they also face a challenge, as approximately 14% of households in these regions are living in poverty (SEADE, 2010).

Considering the wide range of water uses, the primary demand in this area comes from public water supply (44%), followed by industrial activities (31%) and agriculture (24%) (ABPCJ, 2020). The combined effects of economic growth and population expansion have consistently declined water availability per capita, dropping from 1,027.8 m³/person/year in 2013 to 951.57 m³/person/year in 2020 (ABPCJ, 2021). This situation is classified as critical, as the figure falls below the limit of 1,500 m³/person/year established by the State Water Resources Plan of São Paulo (CORHI et al., 2020).



Figure 1. Piracicaba, Capivari, and Jundiá watershed

Source: Consórcio PCJ, 2023

The PCJ watershed experienced seven droughts during the last decade (UN Global Compact, n.d.). Climate change, with modifications in rain patterns and rising temperatures, is expected to impact agricultural and industrial production and make droughts and flooding even more severe than they are today.

5. Methodology

The present study can be classified as applied research with exploratory purposes. Based on the five components for WPI as defined by Sullivan (2002) and

a literature review (Ferreira et al., 2022), a set of indicators were chosen, data were collected and then normalized to calculate the municipal WPI. Table 1 summarizes the selected indicators and their sources.

Table 1. Selected indicators

Dimensions	Indicator	Source
Resources (R)	(R1) Daily average of treated water	SNIS
Access (A)	(A1) Proportion of municipality residents with access to water	SNIS
	(A2) Proportion of municipality residents with access to treated sewage	SNIS
	(A3) Proportion of irrigated area	Agricultural Census
Capacity (C)	(C1) Social Responsibility Index. This index contains 12 indicators grouped into three dimensions: Wealth, Longevity, and Education	SEADE for municipalities in São Paulo state FJP for those in Minas Gerais State
Use (U)	(U1) Water demand: municipal water consumption per capita	PCJ Basin Committees
	(U2) Water efficiency: municipal value added divided by water consumption. It was estimated for the agricultural, industrial and service sectors of each municipality	ANA and IBGE for value added
Environment (E)	(E1) Indicator based on the existence of specific legislation on environmental or ecological-economic zoning, with weight based on the year of passing the law	IBGE – Munic
	(E2) Indicator based on the existence of legislation on conservation units, with weight based on the year of passing the law	IBGE – Munic

Legend:

SNIS: National Sanitation Information System

SEADE: State System for Data Analysis

FJP: João Pinheiro Foundation

ANA: National Agency of Water and Sanitation

IBGE: Brazilian Institute of Geography and Statistics

IBGE – Munic: Basic Municipal Information Survey

Source: Own elaboration

Normalization is a process that enables the comparison of indicators measured in different units. This process was carried out using the following formula (1):

$$\text{Normalized score} = \frac{\text{Actual score} - \text{Min score}}{\text{Max score} - \text{Min score}} \quad (1)$$

Normalized scores range from 0 (indicating the worst contribution to the final index) to 1 (representing the best possible contribution).

According to Sullivan (2002), the WPI formula (2) is:

$$WPI = \frac{w_R R + w_A A + w_C C + w_U U + w_E E}{w_R + w_A + w_C + w_U + w_E} \quad (2)$$

Where w_i refers to the weight of the respective component.

Given the equal relevance of all five dimensions and following the commonly employed aggregation method found in literature, each component carries an identical weight.

Based on the study done by the Centre of Ecology and Hydrology (Lawrence et al., 2002), Table 2 shows the correlation among the components of WPI for the selected municipalities. All the correlations between WPI and its components are statistically significant. Conversely, correlations among components are not statistically significant, except for Capacity and Use. This suggests that each dimension and its respective indicators are crucial and should be retained in the current WPI analysis.

Table 2. Correlation among the WPI components

	WPI	Environment	Access	Capacity	Resources	Use
WPI	1					
Environment	0.49	1				
Access	0.56	0.04 ⁽³⁾	1			
Capacity	0.70	0.03 ⁽³⁾	0.26 ⁽²⁾	1		
Resources	0.29 ⁽²⁾	-0.21 ⁽¹⁾	-0.04 ⁽³⁾	0.12 ⁽³⁾	1	
Use	0.64	0.19 ⁽¹⁾	0.20 ⁽³⁾	0.41	0.24 ⁽²⁾	1

Legend:

(1) Significant at 1%

(2) Significant at 5%

(3) Non-significant

Source: Own elaboration

6. Results and discussion

As opposed to the conventional Poverty Index, which typically focuses on individuals or families, WPI takes a distinct approach by considering the municipality as the primary unit of study.

This instrument proves to be a valuable tool for local government management as it facilitates a comprehensive consideration of sustainability across its three fundamental dimensions:

- a) the social dimension is captured by the Capacity and the Access indicators. In this study, the Capacity indicator was measured using the Social Responsibility Index, which includes income-related indicators such as wealth and education. The Access indicators indirectly reveal the extent to which families can afford water services.
- b) the economic dimension, particularly concerning water-related aspects, is addressed with indicators focusing on water demand and efficiency within the Use dimension.
- c) WPI places significant emphasis on the environmental dimension, particularly on the legislation governing environmental areas. This emphasizes the importance of considering and managing environmental sustainability in alignment with regulatory frameworks, promoting responsible practices.

As a water management tool, WPI allows to rank municipalities (Figure 2). The ranking provides policymakers with a clear understanding of the areas that require immediate attention in terms of water management. Lower WPI rankings may indicate areas facing more significant water-related challenges. Allocating resources based on these rankings allows for targeted interventions and investments where they are most needed. Furthermore, the WPI formula makes it possible to identify which dimensions require special attention.

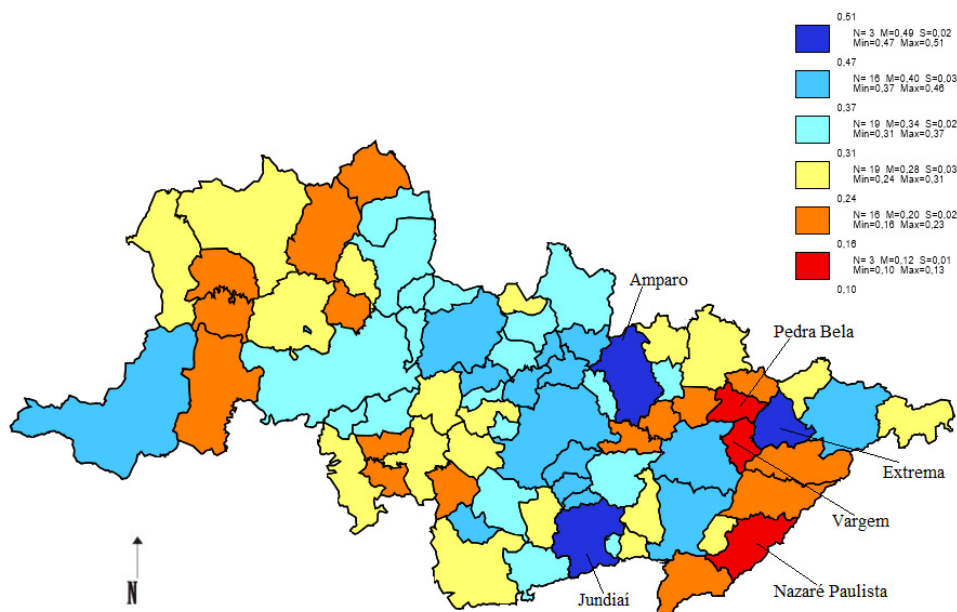


Figure 2. The spatial distribution of WPI

Source: Own elaboration with the use of Philcarto

As shown in Figure 2, the municipalities highlighted in blue exhibit a higher degree of continuity, with a solitary exception in the west of the area. However, the municipalities in the south-east stand out as having the most pronounced concentration of suboptimal performance.

Extrema occupies the top position in the WPI ranking, taking the leading positions in both the Capacity and Use dimensions. Moreover, it stands among the top five municipalities in the Environment dimension. Still, upon closer examination of the disaggregated data, the Access dimension emerges as its weakest aspect.

Amparo, the second best in the overall ranking, occupies the first place in the Resource dimension but finds itself in the least favorable position in the Environment dimension. Also, in the Access dimension, its score falls well below average.

Jundiaí, in the third place, has scored highest in the Environment dimension. Notably, it falls below the average only in the Resource dimension.

The worst performance has been recorded for **Nazaré Paulista**, with most significant weaknesses apparent in the Access dimension. Interestingly, it does not rank among the worst municipalities in the Environment dimension.

Pedra Bella, ranking as the second worst in WPI, exhibits its lowest scores in the Access and Resource dimensions, coupled with a notably poor performance in the Capacity and Use dimensions. However, it stands out positively in the Environment dimension, where it performs significantly above the average.

Lastly, **Vargem Paulista**, which ranks as the third-worst municipality in the study area, notably exceeds the average in the Environment indicator, showing a positive performance in this dimension.

This discussion underscores the effectiveness of WPI's relatively simple structure and its capacity to transition from the overall score to individual components. These features not only facilitate clear communication of the overall results, but also enable the identification of specific weaknesses in each municipality.

For example, the analysis revealed that almost one-third of the surveyed municipalities demonstrate vulnerability in the Environmental dimension. This dimension is directly tied to municipal-level environmental laws within the purview of local government competence, enabling the planning and organization of municipal spaces to protect local environment. Our results show that 24 out of the 76 municipalities in this economically affluent region in Brazil lacked specific legislation on environmental or ecological-economic zoning and regulations on conservation units.

Since 2022, the government of São Paulo has been working on the state Ecological-Economic Zoning (EEZ), a technical and political planning instrument, to promote resilience to climate change, water security, and local inequality reduction, among other goals (SEMIL, 2023). After concluding the diagnostic stage, a training process started in 2024 with the aim of qualifying local administrations to implement public policies oriented towards

“environmental inspection, compensation, recovery, restoration, and licensing” (SEMIL, 2023, p. 12). Such actions should help solve the problems identified in our study and contribute to promoting local sustainable development.

7. WPI and other indicators of well-being

WPI and other indicators of well-being provide a comprehensive perspective on various aspects of the studied issue, such as the social, economic, and environmental factors that contribute to it. Understanding the interplay between WPI and other well-being indicators allows policymakers to make informed decisions that better support the development of a region.

Commonly used indicators for assessing well-being include Gross Domestic Product (GDP), GDP per capita, and Human Development Index (HDI). The GDP and GDP per capita metrics follow a traditional approach, linking economic performance to the measurement of overall well-being. These indicators provide insights into the economic output and average economic well-being of a location. However, their focus on economic performance fails to address the quality of development and the equitable distribution of opportunities within society (Anand & Sen, 2000; Lawrence et al., 2002).

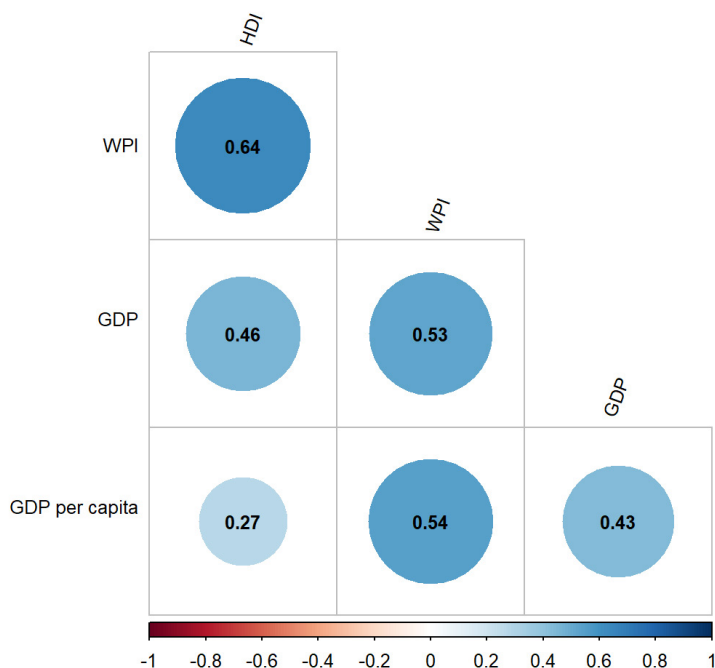


Figure 3. Correlation among WPI, HDI, GDP, and GDP per capita

Note: The circle size is proportional to the statistical significance of the correlation coefficient.

Source: Own elaboration

In response, the United Nations introduced the Human Development Index (HDI) in 1990. The HDI, as a composite index, goes beyond economic indicators, considering factors such as life expectancy, education, and income. This broader approach aims to provide a more comprehensive assessment of human development and well-being. It recognizes that a nation’s well-being is influenced not only by economic factors but also by the health and education of its population.

The correlation scheme in Figure 3 measures the strength of the relationship among the four measures of well-being. As a statistical tool that assesses the degree of association between two sets of data, correlation measures the strength and direction of the linear relationship between variables. All six positive correlations are statistically significant. The most robust association is observed between WPI and HDI, emphasizing the significance of employing multidimensional instruments to assess well-being.

GDP and GDP per capita show a relatively high correlation with WPI, confirming the relevance of the economic dimension in assessing well-being.

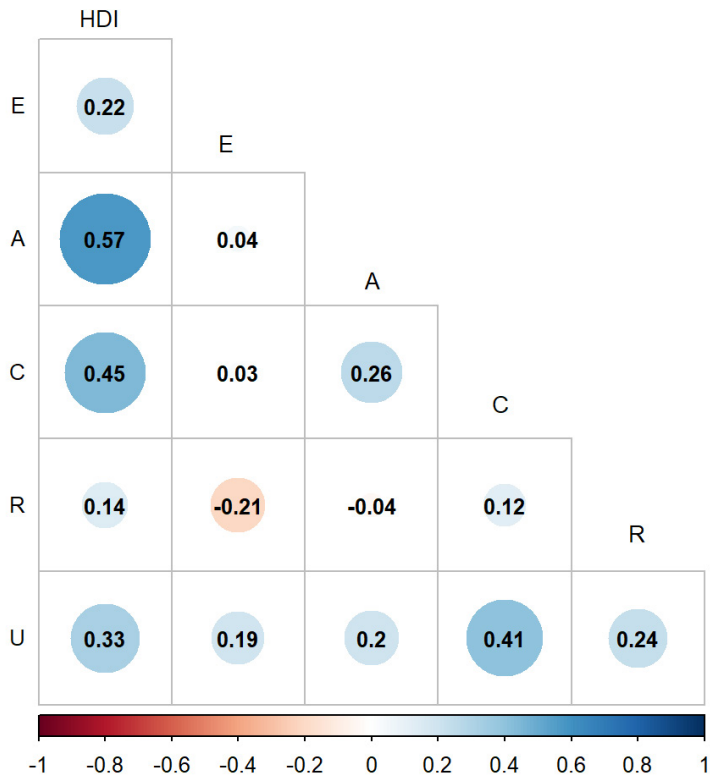


Figure 4. Correlation between HDI and WPI components

Note: The circle size is proportional to the statistical significance of the correlation coefficient.

Source: Own elaboration

Considering the strong correlation between WPI and HDI, the two metrics were additionally examined, as illustrated in Figure 4. This revealed a positive correlation with all WPI components. Resource and Environmental indicators do not exhibit any statistically significant correlation with HDI. In contrast, the other three dimensions show statistically significant relationships. This underscores the importance of a comprehensive analysis that integrates human development with water poverty in promoting sustainable water management.

8. Conclusion

WPI provides a comprehensive evaluation of several aspects of water management, facilitating the formulation of well-informed strategies to ensure sustainable and equitable use of water resources.

The study confirms the relevance of including economic, social, and environmental indicators in water management, emphasizing the scarcity of this essential life resource and its susceptibility to conflicting uses.

The research demonstrates how WPI, as a composite index, aligns with SDG 6 and its targets. At the same time, correlating WPI and HDI confirms that a holistic approach to water management is needed to promote human well-being.

Finally, the practical application of WPI in a relatively rich area in Brazil shows that the index serves as a benchmark for ranking municipalities within the same watershed. Publicizing WPI rankings can raise community awareness about the state of their water resources and the importance of sustainable water management. This, in turn, can foster community engagement and support for initiatives to improve water conditions.

Moreover, WPI aids in water policy decision-making by identifying the weakest dimension in the municipality. Over time, as municipalities work to improve their water management practices, regular WPI rankings provide a measurable way to monitor progress. This allows for assessing the impact of interventions and identifying areas that still need attention.

In essence, WPI serves as a valuable tool for assessing, prioritizing, and addressing water-related challenges at the municipal level. By contributing to more effective and equitable water management strategies, it helps foster sustainable practices.

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ABSTRACT**Water as the key link between economic development and sustainability**

This paper aims to explore the concept of sustainable development by examining the critical role of water as a natural resource essential for life on Earth. It studies water's multifaceted roles as a fundamental resource for life, an economic commodity with a tangible value, and a basic human right acknowledged by the United Nations. By delving into these dimensions – environmental, economic, and social – the paper analyzes the challenges that arise in pursuit of sustainable development through an applied, quantitative, and explanatory approach. The theoretical discussion is complemented by estimating the Water Poverty Index (WPI), a multidimensional tool to evaluate water poverty. This evaluation has been carried out in one of Brazil's most economically advanced regions and has provided context to the theoretical concepts discussed. This region, home to approximately six million predominantly urban inhabitants across 76 municipalities in the interior area of the State of São Paulo, plays a significant role in the Brazilian economy, contributing to 7% of the country's GDP. However, it is currently facing decreasing water supply for human consumption, which has fallen well below the critical limit of 1,500 m³ per inhabitant per year. WPI has proved to be a useful water management tool. For example, it has identified that nearly one-third of the surveyed municipalities exhibit vulnerability in the environmental dimension. This reinforces the pressing need to implement a more efficacious water policy on a local scale. Furthermore, a positive correlation has been observed between WPI and GDP per capita, as well as HDI, confirming the importance of a holistic approach to sustainable development.

Keywords: Water Poverty Index, sustainable development, economic development

PART II

**DILEMMAS OF ECONOMIC
DEVELOPMENT IN THE AGE
OF GLOBALISATION**

ENCOUNTERS AND TENSIONS BETWEEN THE COUNTRYSIDE AND THE CITY. INSIGHTS FROM EL TAMBO, NARIÑO, COLOMBIA

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1. Colombia and trade liberalization

The economic opening model is a neoliberal paradigm argued to help the development in different sectors of the economy, such as industry, construction, services, and agriculture. In the mid-twentieth century, Colombia and some other Latin American countries consolidated the role of agriculture as a development strategy, promoting the process of its industrialization through exports aimed at obtaining foreign currency (a policy which in Latin American countries was referred to as the Import Substitution Industrialization Model). At the same time, agriculture was responsible for supplying food to urban centers in order to control prices and thus keep wages low. In a nutshell, the role of agriculture was to supply industry with necessary raw materials and to feed its workers.

By the 1980s and the 1990s, it became apparent that the agricultural sector was unable to respond to the needs of industrialization. On a structural level, it failed to adapt to technical progress; as a result, food demand was restricted, which led to the trade balance in the sector tilting more towards imports than exports, reducing “the foreign exchange available for financing industrialization” (Kay, 2000, p. 8). In this sense, the inability of the agricultural sector to meet the demand for raw materials (both domestic and for exports) led to an increase in food prices and spending on workers’ wages (Kay, 2019). Given the lacking export of products, Latin American states resorted to external loans taken out in international banks (Toscano Mora, 2006). This led to their growing indebtedness in the 1970s, and by the 1980s, the crisis in these countries had exacerbated so much that they were forced to liberate their economies by seeking financial support from global institutions.

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As the demand for food increased beyond the productive capacity of farmers, the countries found it necessary to import basic foodstuffs to meet the needs of the growing industry in urban centers. This form of dependency soon became deficient. Foreign debt combined with abundance of imported food led to a reform of agricultural policies (Rubio, 2001). The new legislation promoted in the 1980s “openly excluded peasants as producers of basic foodstuffs, focused on the reduction of subsidies, credit, agricultural training, and targeted public spending in the sector” (Rubio, 2001, p. 67; own translation).

This crisis emerged in the era of so-called neoliberalism (introduced since the 1980s and 1990s), which saw an acceleration of the processes of transformation towards market liberation and consequent entrenchment of market relations in various sectors of the economy. In this context, the agricultural sector underwent a transformation from agrarian to rural; namely, agriculture no longer focused solely on producing raw materials but became multifunctional, which implied that peasant households were involved in non-agricultural activities dedicated to production and services, such as handicrafts, micro-enterprises, rural tourism. This phenomenon is known as new rurality (Kay, 2007).

The new rurality of the agricultural sector, geared towards free market and globalization, implied that the countryside itself started to be governed by the laws of supply and demand and competitiveness (Pérez Correa & Farah Quijano, 2002). In a globalizing world, a farmer’s relationship with the land is no longer “only one of self-subsistence but also of agricultural production for commercial exchange [...] and, at the same time, it links networks in global contexts, going beyond hermetic ways of life” (Duarte & Montenegro, 2020, p. 130; own translation).

When discussing the relationship between the countryside and the city in Colombia in the midst of global economic development, it is also necessary to point to aspects such as violence or armed conflict. These issues contributed to the rural regions of some of the country’s departments, for instance Nariño, giving way to mercantile dynamics dictated by international trade and urban centers, examples of which include avocado monoculture farming or rural tourism activities. The Colombian context is complicated by certain events that differentiate it from other Latin American countries, such as the peace process meant to bring an end to the internal conflict. The agreements signed as part of the process, on the one hand, recognize the resilience of peasant victims of the armed conflict and, on the other, promise the restitution of land and the implementation of policies for economic promotion and development in areas affected by violence.

It should be noted that the peace agreement influenced the development plans in Colombia (on the national, departmental, and municipal level) and thus resulted in the intensification of trade liberalization and advancement of the rural–urban relationship in departments affected by the armed conflict. The governmental projects launched in the last decade have been directed at rural transformation and boosting the competitive potential of the

countryside, free trade, and investment (Fajardo et al., 2015). They have led to reversing the effects of violence and served as a mechanism for reducing poverty and the gap between the countryside and urban areas. The new forms of financing have brought the construction of access routes to main roads to facilitate the transport of products, which has been an important contributor to economic development. Likewise, in relation to exports, the new schemes upheld the agrarian policy by increasing the exports of agricultural products, mainly through free trade agreements (Bahamon Rios, 2015).

Given the above, the relationship between the countryside and the city in the Department of Nariño has been growing closer due to two factors. The first has to do with the current global realities, which demand development on a global scale and economic openness. The second relates to the liberalization of trade advancing since the signing of the peace agreements in 2016.

In terms of the first aspect, we need to note that the last decades have seen growing globalization of market relations resulting from the adoption of the neoliberal model. This process has been manifested in introducing multifunctionality into the countryside and expanding its relationship with the urban sector. In Colombia, the transnational export network for mass agricultural production has grown significantly, and the activities of the farmers have come under the influence of external agents. As a consequence, the rural population has gradually acquired the role of modern agricultural entrepreneurs (Bretón Solo de Zaldívar, 1993). The concept of a farmer, in terms of the social relations of production, is becoming obsolete. In the new rurality, the peasant activity starts to be defined as “family farming”, which is characterized, firstly, by the importance of self-consumption (far from the market economy, assimilated to the traditional concept of a peasant) and, secondly, by its structure governed by market relations. By requiring agricultural production to fit into the rigid frame of entrepreneurship, capitalism destroys traditional farming and modifies its social and productive relations within the global economy (Bretón Solo de Zaldívar, 1993).

Given the above, it is important to point out how the adoption of the neoliberal model by the Colombian government has led to the transformation of the traditional farmer into a modern businessman. This has taken place in the form of a series of historical events that have pushed peasants to increase their competitiveness and opt for globalization. The following are the policies that have had an impact on the productive transformation of the Colombian farmer:

Table 1. Government policies and peasant modernization

Economic Opening (1990)	Reform promoted by the government of César Gaviria, eliminating tariffs and subsidies to integrate Colombia into global markets. It forced peasants to compete with imported products, encouraging the adoption of monoculture and technification to maintain competitiveness.
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Law 160 of 1994	Legislation which fostered cooperative projects and public–private partnerships, promoting crops for export. It also sought the redistribution of land and the creation of Business Development Zones that promoted agribusiness, which forced peasants to take up salaried jobs or sign precarious contracts.
Law 81 of 1988 (Regional Corporations for Sustainable Development)	Legislation introducing environmental standards in production, promoting modern agricultural practices and international certifications with which farms needed to comply to export their products. This policy favored technologically-advanced and standardized models, disregarding ancestral peasant knowledge about biodiversity and sustainability.
Plan Colombia (1999)	Program to combat drug trafficking through the substitution of illicit crops. It led to the militarization of rural areas, causing the displacement of peasant communities due to the armed conflict, as well as favoring large agro-industrial monoculture projects that benefitted agro-export companies and stifled the economic development of farms.
Law 101 of 1993 (Agricultural Development)	Legislation fostering agricultural competitiveness and the modernization of production chains using advanced technologies and financing for agro-industrial projects. It uprooted traditional peasant practices, promoted inequality, and led to the marginalization of small producers.
Law 811 of 2003 (Agrarian Transformation Companies)	Legislation allowing for the establishment of product partnerships to compete in global markets. However, this agreement favors large producers due to bureaucratic demands and lack of required know-how and initial capital among smallholders.
Free Trade Agreement (FTA)	NAFTA eliminates the trade barrier between countries by promoting agricultural exports. However, it effectively marginalizes farmers who fail to comply with the required quality certifications. It also exposes peasants to unfair competition with imported products such as corn and wheat, leading to the loss of food sovereignty and the abandonment of traditional crops for specialized monocultures.
Law 1876 of 2017 (National System of Agricultural Innovation)	Legislation establishing a system to promote research, technical assistance, and innovation in agriculture. Although it modernized production processes, it also devalued ancestral peasant knowledge.
Rural Mission (2014)	Strategy aimed at modernizing the countryside through infrastructure development and loans. However, it redirected resources towards business projects, limiting support for peasant family production.
Colombia Siembra Program (2015)	Program promoting the expansion of arable areas and technological improvement, though concomitantly favoring commercial monocultures which displaced subsistence food. It marginalized peasants with limited land resources and access to technologies and resulted in deforestation due to the expansion of monocultures.

Areas of Interest for Rural, Economic and Social Development (ZIDRES) – Law 1776 of 2016	Legislation promoting agricultural development in defined areas through public-private partnerships. It favored large agro-industrial enterprises, relegating peasants to secondary roles in the production chains.
Agricultural Policy 2018–2022 (Pact for Rural Entrepreneurship)	Legislation seeking to give rural enterprises a strong position in the countryside. It led to the domination of specialized production and exports, reducing peasant autonomy. The policy promoted business-model farming and encouraged the dependence of peasants on loans, trapping them in debt cycles.

Source: Own elaboration

The government policies presented above created a contradictory dynamic: although the farmers have been integrated into the neoliberal model as suppliers of raw materials, they concomitantly fall victim to processes of marginalization and exclusion. The relationship between the countryside and the city becomes a space of tension and constant negotiation. Public policies have proved far from offering comprehensive solutions, instead forcing the Colombian peasantry to adapt to the demands of economy and putting them in a state of vulnerability.

The second factor has to do with the commercial opening that the Department of Nariño has experienced since the Colombian peace agreements. Nariño was particularly strongly affected by the armed conflict, as its climate and geomorphological conditions make it an attractive site for cultivating illicit crops. It is one of the four departments which are home to 78% of all coca plantations in the country. Moreover, according to the second Colombian Drug Observatory (2020), in 2020 Nariño was the department with the highest volume of coca crops after Norte de Santander. Apart from these illicit plantations, Nariño faced struggles related to land dispossession, violence, deployment of anti-personnel mines, and forced displacement. The various armed criminal groups active in the region engaged in a war over coca, which led to the reduction of small-scale agricultural trade volume and discouraged tourism.

After the signing of the peace agreement, Nariño opened its doors to trade and tourism, which resulted in a closer relationship between the countryside and the city inside and outside the department. The municipality of El Tambo, located north of Pasto – the capital of Nariño – may serve as an example of this process. In the recent period, it has been increasingly involved in Hass avocado monoculture and in promoting rural tourism. As a consequence of the economic opening, the rural-urban relationship has been marked by numerous encounters and tensions. In this paper, these dynamics have been identified through qualitative research and field work carried out in selected villages and urban centers in Nariño (Capulí Grande village, Capulí de Minas village, Los Llanos village, and the urban centers of El Tambo and Pasto).



Figure 1. Production of Hass avocado monoculture and rural tourism in Capulí Grande village, El Tambo

Source: Own elaboration

2. Encounters

The government policy in Colombia is centralized, which means that national, departmental, and municipal development plans are governed by the same economic development strategies regardless of the local contexts and issues. Therefore, the Colombian authorities see the peace agreements as benefitting the accumulation of capital. This is because their successful implementation would lead to increased rates of domestic and foreign investments (Hylton & Tauss, 2016). As long as the armed conflict in Colombia continues, it constitutes “‘a security threat’ for the expansion of extractive projects and agribusiness in the countryside” (Hylton & Tauss, 2016, p. 256). These projects include export monocultures (fruit, avocado), which start to supersede traditional crops (corn, potatoes, wheat). Following the peace accords, businessmen from the inner regions of the country (such as Valle or Antioquia) began to consider the departments previously displaying the highest rates of violence, including Nariño, as attractive venues for expanding their development projects (Restrepo, 2004).

The Colombian government aims to achieve the productive conversion of peasants through national, governmental, and municipal development plans. In this context, the first “encounter” between the countryside and the city has

been rooted in the adoption of policies which strengthen the rural–urban relationship by guiding public investment, concomitantly recognizing the value of farmers' work and their contribution to rural and urban food sustenance under a scheme of economic development.

The second “encounter” has taken place after the authorities directed funds towards investments in road infrastructure. Road accessibility helps tighten the connections between rural and urban areas through the transport of agricultural products and tourism. In 2021, the municipality of El Tambo completed works on a road connecting it with the capital of Nariño (the city of Pasto). This encouraged peasant communities to opt for agri-food production meeting the needs of Colombian cities and foreign markets, as is the case with Hass avocado monocultures. Currently, El Tambo is expanding its Hass avocado production. Starting from the lowest number of farms recorded in 2015, it now boasts ca. 70 hectares of plantations scattered around different villages. The crops are distributed throughout the country and abroad through a network of marketing agents, transportation services, and agro-exporters. Thanks to the new road connection, the municipality is able to trade with urban centers, which has helped intensify the exchange of monoculture production.

When it comes to applying the urban approach to the countryside, it is important to mention the certifications issued by the Colombian Agricultural Institute (ICA) to peasant producers of Hass avocados. The government policy has instated sanitary control of agri-food production and with it has adopted technical assistance mechanisms for monitoring agricultural production. These solutions introduce sustainable control of avocado production and its planting and harvesting methods with the goal of acquiring a product that meets export and consumption requirements. The audits are carried out by professionals from urban centers, who inspect farms and offer training, technical assistance, and on-site visits. These encounters between experts and peasant communities produce and reinforce knowledge in order to improve the Hass avocado production processes.

At the same time, the construction of roads has stimulated connecting individual municipalities in the department and allowed for opening tourist zones in rural areas. In a multifunctional countryside, tourism offers an alternative income source for peasant communities if they decide to diversify their production units or farms. Here, the “encounter” between the countryside and the city consists in the socio-cultural and economic exchange between tourists and farmers. Rural tourism allows urban visitors to interact, explore, and experience the rural environment, taste the local cuisine or stay in the locals' homes; in return, the peasants receive payment for their services. With the signing of the peace agreements, El Tambo's municipal policy took a turn towards the promotion of rural ecotourism as a form of economic subsistence for peasants and the recognition of rural environments as forms of agri-food sustenance.

Finally, the last “encounter” between the countryside and the city may refer to the access to the global web. Digital connectivity was first introduced in urban centers but is now reaching rural areas through mobile telephony, thus

providing rural communities with access to the Internet. This allows peasants to browse sites providing information on agricultural practices implemented in other regions of the country and abroad, as well as to communicate with agricultural centers for advice on the use of fertilizers and methods of planting, cultivation, or harvesting. With regard to rural tourism, digital connectivity makes it possible for farmers to promote their services on social media and keep in touch with consumers or tourists.

3. Tensions

What is understood as “tensions” are the consequences of the process of the accumulation of capital reaching its limit under the neoliberal model. In this context, it is pertinent to mention the geospatial process in which territories adapt to economic systems. Harvey (2012) points out that capitalism can be perceived not only as a historical fact, but also as a spatial phenomenon. The forms of capitalist production within rural spaces have reconfigured the territory and the social relations among its residents.

The first “tension” has to do with environmental modifications and their consequences. The introduction of monocultures (in this case Hass avocado) into small-scale peasant farms leads to: a) changes in the chemical and physical composition of soil due to the use of agrochemicals; b) cutting down trees around the monoculture to ensure exposure of the crop to wind and sunlight; c) construction of artificial aqueducts for irrigation; and d) conversion (at a geospatial level) of roads into highways for easier transport of products to cities. Such transformations in the environment also pose a threat to water sources (as they may be contaminated) and to insects such as bees (which may go extinct). The research conducted for this paper has revealed discontent with the use of agrochemicals among the rural community. Their introduction has resulted in mass death of honeybees, sparking a conflict between local Hass avocado producers and beekeepers. The consequences of monoculture farming listed above do not affect solely the peasant communities but also the inhabitants of nearby urban centers who are the consumers of the food produced in the countryside and who use the same water.

The second “tension” is associated with the transformation of traditional peasant culture. With the economic opening and the peace agreements, the peasants are acquiring new knowledge and learning new practices. In their desire to sell products (such as the Hass avocado) or offer tourist services, the farmers have abandoned their traditional modes of cultivating and harvesting crops, communication methods, and more. Today, they are driven by a desire to survive and generate income, which forces them to invest more time and effort in producing goods or providing services.

In areas of the department under study, the peasants have set their sights on mass production, which means that farms producing traditional foodstuffs

such as potatoes, corn, or beans are being replaced by plantations of Hass avocado or coffee. With the change of the cultivated crops, the traditional rural practices start to transform even quicker. The peasants learn new farming methods and abandon the ancestral wisdoms preaching sovereign food production and harmonious relationship with the land and nature. This phenomenon also proves detrimental to urban centers, because it leads to lower volume of local production and a surge in the prices of imported products. Additionally, organic production gives way to the use of fertilizers and agrochemicals, which affects the health of the consumers of the end product.

Nariño has experienced a remarkable boom in rural tourism. During the active armed conflict, the department was largely isolated from the central regions of the country. Consequently, tourism was far from being a key sector for economic growth, as most people feared traveling through some of the roads of the municipality. Over the last few years, tourism rates in the rural areas of El Tambo have increased, with services for the visitors provided by either local peasants or city residents who have bought land in the countryside. In the last two years, the latter group opened twelve farms in different villages of El Tambo; these establishments serve food, offer fishing spots, provide lodging, or render other tourist services. The urban population has integrated into the countryside.

The above process has brought two major consequences. The first is the growing influx of city dwellers (local and national) to the countryside, and the second is the lack of regulation of Hass avocado monocultures and of the ways in which they overlap with rural tourism.

The growing numbers of urban residents settling in the countryside have resulted in increased land and rural population displacement. Peasants sell land to city dwellers with purchasing power, who then convert the farms into their vacation houses or recreation sites. The large-scale sale of land is the result of changes in the occupational profile of rural residents, with the new generations finding employment as domestic or salaried workers in the city. They do so because of the insufficient income generated by farming, too low to enable social reproduction. The peasant population in El Tambo declined from 20,840 in 1998 to 11,587 in 1999, further dropping to 6,081 by 2020 (DANE, 2022). In this case, the essence of the “tension” lies in the crisis of the countryside, in which farmers are displaced and land ownership becomes increasingly concentrated in private hands, exacerbating the loss of traditional wisdom and the privatization of land. Who is going to work the fields? If the peasants leave the countryside, they take with them the knowledge of how food should be grown and produced, of how the land and crops should be cared for. This, in turn, works to the detriment of food production in urban centers.

The final “tension” is the lack of supervision, training, and regulations governing the expansion of monocultures and the enforcement of safe areas where tourist services may be rendered. The research carried out for this paper shows that the departmental government has not implemented any environmental

policies which would help supervise the growth of monocultures and guarantee security in tourist areas while protecting the natural environment and ensuring consumer safety.

4. Conclusion

The economic opening, globalization, and the peace agreements have transformed relations between the urban and rural areas in Colombia. Beforehand, the municipalities most severely affected by the activity of guerrillas and coca production long remained isolated from the rest of the country and preserved their traditional modes of social coexistence and agricultural production. The government policy of promoting economic development with the export of monocultural crops – initially coffee and later avocados – brought with it a new set of relations between the countryside and both urban centers and foreign countries and changed the patterns of production and generation of farming knowledge.

In the desire for an economic opening, rural tourism and ecotourism prompted peasants to sell their farms to urban residents, who turned them into their vacation homes or started to offer accommodation, dining, or entertainment services. This process is nothing more than an encroachment of the capitalist model of production growth and consumption on peasant life. Moreover, apart from transforming the socio-structural organization of the countryside, the process of accumulating capital also has implications for the overall image of the rural community, as it leads to abandoning traditional food production, loss of ancestral knowledge, and shrinking of the peasant population. The above processes, combined with intensified rural–urban relations, have generated a drastic civilizational change in the life of Colombian peasants, destroying the socio-spatial ecosystem built over generations in less than twenty years.

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ABSTRACT

Encounters and tensions between the countryside and the city. Insights from El Tambo, Nariño, Colombia

Following the adoption of the economic opening model (from 1990 to the present day), the Colombian peasant has gone from one who sows and cultivates the land for his or her own consumption, selling the surplus in the local marketplace, to a farmer-cum-entrepreneur. The rural–urban relationship intensifies due to the scarcity of the market’s productive conditions and lack of economic profitability. The peasant then seeks to adapt to the mercantile dynamics of international trade and urban centers, such as the agricultural production of avocado monoculture or rural tourism activities. In this context, the objective of the present paper is to discuss the encounters and tensions inherent to the rural–urban relationship on the basis of findings from qualitative research and field studies carried out in selected villages and urban centers in the Department of Nariño, Colombia (Capulí Grande village, Capulí de Minas village, Los Llanos village, urban area of the municipality of El Tambo and the capital Pasto), where the commercialization of the Hass avocado and rural–urban tourism has increased since the conclusion of the peace process in 2016. The studied issues include the introduction of the economic opening model and its impact on rural transformation; the peace agreements and the transformation of agricultural and urban practices in Nariño (monocultures, tourism, road and digital connectivity); government policy aimed at the productive reconversion of farmers; transformation of traditional peasant culture; environmental problems. The most visible result of these processes is the transformation of daily practices of peasants.

Keywords: water, rural-urban relationship, rural transformation, Department of Nariño, Colombia

SUSTAINABLE MODELS OF TERRITORIAL DEVELOPMENT: FROM LOCAL DEVELOPMENT TO RURAL DEVELOPMENT IN THE CASE OF SPAIN

Eloy Gómez-Pellón¹

1. Introduction

Towards the end of the 1970s, Spain saw the early signs of a turning point in development policies, which was bound to bring considerable consequences. Until then, the country's principal development model, typical of post-war Europe, had been based on external investment founded on the idea of necessary movement of goods and production factors, in particular capital, labour, and technology. Consequently, the quantitative development model leant heavily on the specialisation of production. Its weakest point was vulnerability to economic crises, which could generate large-scale damages to a system focusing on production output and lacking versatility. Naturally, this was an example of a top-down development model, but one of its features was also the disregard for ecological considerations or social effects of its implementation. The clear result of these exogenous policies was dependence on external actors and neglect of regional or local potentialities, closing the possibilities of giving even the smallest stimulus to internal initiative and putting to bed any attempts at innovation.

It was by chance that this model started to gradually give way to another, considerably different one. The fuel crisis of the 1970s exposed the vulnerability of the erstwhile development strategy. The new policy, to which the current development model is heir, would emphasise two intrinsically linked factors. On the one hand, territory would become the keyword and take on a major role within the scheme; and on the other hand, full trust was put in endogenous development. Concomitantly, concerns which seemed a thing of the past reemerged on the horizon. The fall of local markets, changes in global demand, and the introduction of earlier unknown factors, such as new technologies, boosted environmental awareness and prompted decision-makers to be more

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conscious of the deterioration of natural resources, ways of improving quality of life, favouring alternatives promoting healthy lifestyles, and so on. In short, the philosophy of development underwent a radical transformation which sent shockwaves to other domains of human activity and became a fixture of the internal fabric of Western society.

2. The issue of local development

The 1970s saw the birth of the paradigm of local development. Up until then, development had mostly been considered a term pertinent to so-called “backward” societies and conceptualised in two distinct ways.

The first corresponded with the modernisation theory, according to which any society could modernise itself simply by adopting the measures applied in developed countries. According to this theory, prominently advocated by Rostow (1971), industrialisation led to progress in the countries which had equipped themselves with technology designed to reach high levels of production. Once countries achieved industrialisation, their development would go hand in hand with it. If applied on a local scale, however, the theory ignored the importance of territory and instead argued that development was possible in any space in the world if it could count on financial aid from countries or societies endowed with new technologies.

The second point of view was known as the dependency theory, according to which poor countries were continuously suppressed by rich states which had historically colonised and exploited them. Instead of introducing new technologies in the “periphery”, which always struggled to keep up with the more developed countries, the “core” created an insuperable, entangled network of dependency which effectively mirrored the colonial period. The more indebted the poor countries became, the more subordinate they needed to be to the wealthy countries. A. Gunder Frank (1966) and others held that historic conditioning had weighed tragically on certain societies condemned to poverty. Effectively, both the modernisation theory and the dependency theory were frequently used to explain the so-called “backwardness” of Ibero-American societies or various population groups in other parts of the world.

Nevertheless, the 1970s saw the emergence of theories of development at a local level, diverging substantially from the previous ones. In this new paradigm, local development was possible in any part of the world if the potential of the location’s features was properly recognised. Local development was a strategy promoted by actors from given territories, representing their residents and looking to develop them. According to the new theory, the key to development are internal synergies and the connections forged by local actors with centres of decision-making power, be it economic, social, political, or other. In line with this new concept, local development is possible with the recognition of the value given to human, natural, and cultural resources.

Provided that the actors generate the appropriate synergies and make the necessary connections to decision-makers, a territory will be able to develop.

As it transpires from the above, local development relies on the identification and subsequent advantageous use of the endogenous potential of a community, be it a city, a neighbourhood, a district, a hamlet, or other territorial unit. As the concept emerged, it was seen as a vehicle for transforming economy, society, and local cultures with the fundamental aim of improving the living conditions of the inhabitants of a certain place. To achieve this, it was essential to coordinate the work of public and private social actors, whose task was to leverage all resources at their disposal. Territory, contrary to the rationale standing behind development strategies prior to the 1970s, becomes the fundamental reference point for desired changes, with the resources identified as necessary having, in principle, endogenous origins. Social capital clearly plays a pivotal role in every local development strategy, insomuch that it reduces the required organisational effort and at the same time, due to its crystalised nature, is a guarantee for success. Nonetheless, the connections established by local social actors with external entities are just as important in a local development strategy, since they help formulate the correct course of action for the plan.

In the past, “social capital” was either considered negligible or went completely unnoticed, despite the fact that L.J. Hanifan (1920) and other theoreticians had forged the term already in the first quarter of the twentieth century. However, with the beginning of the 1970s – and especially after Bourdieu (1997) refined its conceptualisation – it rose to the status of a primordial factor in any development strategy. Still, we are undoubtedly dealing with a somewhat murky concept, defined as “the sum of real or potential resources accrued from the possession of a more or less institutionalised lasting network of mutual relationships” (Bourdieu, 1980, p. 2; own translation). For the French sociologist, social capital is inseparable from other forms of capital, as they all make up the network of sensitive (or “differential”, in current terminology) relations.

This way, social capital encompasses certain immaterial aspects, such as collective identity, social, economic, and territorial cohesion (Gómez-Pellón, 2017, 2018a, 2018b), work ethic, the strength of essential local institutions, values such as preservation, sacrifice, collaboration, solidarity, commercial and artisanal traditions, and many more. It is no exaggeration, therefore, to say that, contrary to popular belief, immaterial factors hold much more weight for local development than those purely material.

It is generally acknowledged that any process of local development has three essential objectives: the transformation and development of the local productive system, the growth of production, and the improvement of the local population’s living standard (see Vázquez Barquero, 2005, 2010). Many more specific goals lie beneath these three, depending on the strategy adopted. The root idea is that there is already a minimum economic and social foundation

in the territory that needs to be stimulated via action taken within the most sensitive areas. Any group occupying a certain space has some productive structure, natural resources, labour market, business capacity, social fabric, political structure – in short, it has potential for development, and all these features need to be channelled in the appropriate direction.

In the case of Spain, the last quarter of the twentieth century saw the countryside struggle with a number of major problems. Depopulation and the ageing of rural populations were glaringly obvious, as was the need to provide these areas with services and facilities. However, hopes for a better future appeared with the economic revitalisation of the countryside. Moreover, the so-called territorial development policy was launched in the 1980s, converging with the aforementioned development strategies and implemented in line with European planning and land management guidelines. The strategy was enriched with the concept of sustainable development that emerged in the same decade, although it only took on its current shape in the early 1990s. It was when it embraced a triple environmental, economic, and socio-cultural dimension, its formulation closely akin to so-called Agenda 21 of the United Nations. In 1999, Spain integrated its rural development policies with the framework of the European Spatial Development Perspective, which takes into account not only economic and social but also territorial considerations. As a result, the Spanish strategy should have a higher chance of lasting success (Gómez-Pellón, 2017).

As can be easily deduced, the general philosophy of Agenda 21 falls in line with the idea of local development, insofar as it constitutes a certain configuration of socioeconomic reality with a “bottom-up” dynamic. This aspect has formed part of the conceptualisations of local development since the 1970s, a departure from the earlier modernising vision of development which, for the reasons discussed earlier, worked “from top to bottom”. Consequently, in this new proposition, development is not a matter of instating global macroeconomic policies but rather of promoting strategies that combine the macro- and micro-levels, always taking the local reality as the reference point (see Borja & Castells, 1997) – the same ideals that stand behind the United Nations Development Programme (UNDP). Concomitantly, the philosophy of local development awards a special role to local authorities as representatives of the most elementary and fundamental level of administration.

There are various currents within the broader theory of local development, with some authors interpreting it as the process of planning activities to be carried out in a given territory with a view to the future, preceded by an agreement reached by all actors involved, and preferably led by local authorities: local administration and public administrations in general, various state-managed bodies (trade unions, chambers of commerce, etc.), private entities (companies, banking entities, etc.), institutions specialising in the promotion of development (development agencies, universities, research centres, etc.), and social organisations and movements, to name only a few. For purely political

reasons, local development very quickly gained popularity in states in which the local administration is responsible for managing many different fields, including housing, infrastructure, and so forth. This was, for example, the case of the UK, with its experiences in Scotland and Wales, and of Nordic countries.

Conversely, if the local administration has quite a limited range of competencies and most power is held by regional or state government, the philosophy of local development needs some time to take hold. This was the case in Spain, where the scheme only started to be adopted well into the 1980s, which is why it fundamentally constituted an imitation of the solutions already in place in other countries.

3. From classical regional development to endogenous development models

It is generally accepted that when we talk about development, we do not limit our discussion to simple economic growth, but more so think of an organised process of wealth creation through the mobilisation of all available resources, be they natural or physical, as well as economic or human. However, when debating on the concept of social development, we must venture beyond this competition for resources and take into consideration the sociocultural component, which consist in a transformation of social structures. As industrial society started to give way to a post-industrial one, a process which began at the end of the 1970s, profound concerns arose all across Europe. They opened the way for adopting a philosophy of development which, in a general sense, was not new. Its novelty, in fact, would be determined by the eventually adopted strategies. Contrary to the classical models of regional development, which followed “top-down” dynamics, the new development models that took sway in the 1980s opted for a “bottom-up” structure, implicitly bringing a radical change to how development was approached. Nowadays, we see growing dominance of the “bottom-up” local development models, earlier neglected due to the pervasiveness of “top-down” philosophy.

The 1990s saw the rise of local development, often interpreted as micro-spatial application of regional development, in its endogenous modality. The relative novelty that surrounded the concept of the so-called local economic development lay in a greater emphasis on local economic policies and in particular attention paid to rural areas, especially on the county scale, and even to small cities, progressively giving local governments the power to triangulate these development strategies (see Esparcia Pérez & Escribano Pizarro, 2015; Esparcia Pérez et al., 2016). This model served as the immediate predecessor of European programmes of rural development, with LEADER considered the flagship initiative in this respect. The conceptual foundations of this solution still hold their influence in the whole area of Europe, with Spain providing an excellent example of their implementation. Rural development

has become a basis for models devised on various territorial scales: local, county, or regional (Precedo Ledo 2004; Precedo Ledo & Míguez Iglesias, 2007). These programmes are rooted in the philosophy of endogenous development – that is, as mentioned above, taking advantage of the local conditions following rigorous preparations – and in the principle of partnership, which serves as a means of support for rural development initiatives. Local and rural development required mutual boost strategies that would generate immediate revenue on a county scale; as a result, cultural heritage began to enjoy unprecedented attention (Gómez-Pellón, 2006). With the parallel emergence of the French community model in the 1990s, based firmly on the principles of associationism and cooperation, community museums, eco-museums, and rural tourism started to garner great popularity and immediately reap benefits (Gómez-Pellón, 2004, 2005; Marcos Arévalo & Ledesma, 2010).

As is to be expected, rural development refers to initiatives aimed at improving the quality of life of non-urban communities. Given that rural areas play a very important part in human life on Earth, their development is a matter of broad public interest. Rural areas around the world share many common problems, starting with their low demographic density, their inadequate road and transport infrastructure, their limited access to services, particularly in terms of healthcare and education, their population imbalance, and many others. For these reasons, development in the countryside often relies on strategies coupling economic growth with the conservation of traditional rural identities. While the rural populations on a global scale mostly display well-defined specialisations, be it agriculture, cattle rearing, or both, Europe stands out from this pattern, as the residents of its countryside often engage in various other undertakings alongside their main occupation.

Rural development in Europe is inseparable from the Common Agricultural Policy (CAP). It was instituted under Article 39 of the Treaty of Rome adopted in the 1970s and laid down a range of well-defined strategies aimed at increased productivity and improving living conditions in rural areas. However, the CAP came into being when the supply needs of urban settlements had to be met and the rent levels in the countryside had to be maintained – a situation very different from what the 1980s brought. Up to that moment, the CAP may have been considered the most important community policy. Later, however, the EEC started to work on developing a very distinctive concept of rural development, which came to be elucidated in the European Commission publication titled *The Future of Rural Society* (Commission of the European Communities, 1988). Being the second pillar of the CAP, rural development constitutes a priority of the European Union. Its goals include the quest for agricultural competitiveness, providing territorial and environmental management, improving quality of life and diversification of rural areas. The EU's dedication to these objectives is exemplified by the LEADER programme, which is one of the greatest expressions of European socioeconomic interventions in non-urban spaces.

The Future of Rural Society set out an entire strategic programme for the countryside, designed to be implemented starting from the end of the 1980s. It effectively abandoned all provisions of the previous plan, namely the production of a generous surplus and a complex price support policy, substituting the latter with direct payments. The new scheme put emphasis on a series of propositions that later proved essential to meet the desired objectives. The aim was to achieve endogenous or internal base development which would help integrate rural areas with the exterior and at the same time meet the standards of sustainability. When the document was published, this was hardly an innovative approach (Gómez-Pellón, 2010). However, the programme also featured a proposition which was perhaps the strongest hint as to the underlying vision behind the document, namely the diversification of income sources among rural inhabitants. In other words, the idea was to break with reliance on so-called part-time farming by promoting agrarian multi-activity, with rural dwellers combining income obtained from farming – whether it was their principal source of subsistence or not – with income earned from other activities. While part-time farming puts the responsibility for generating income solely on the owner of the agricultural business, agrarian multi-activity involves the whole family.

Hence, the aim of *The Future of Rural Society* was to encourage the rural population to stay in the countryside, protect it and look after it, regardless of whether they were involved in farming or not. Although it was common knowledge that people living in rural areas could not subsist on the income generated solely from agrarian activity, it was also clear that their exodus to the cities would be a negative phenomenon, most glaringly due to the lack of employment opportunities in urban areas, but also because it was simply indispensable for the countryside to continue existing. It is interesting to note that while the early 1980s saw the vision of development slowly shift from internationally to nationally stimulated, it evolved even further to focus on the subnational level, firstly regional and later local. This was precisely the moment in time when local development strategies were perfected, imbued with the desire to discover the full potential of territories and all the capabilities of their economic and social network. At the same time, the previously dominant macroeconomic perspective started to give way to microeconomic viewpoints. The new proposals included conferring a more active role on local actors due to their proximity to residents and their excellent knowledge of the potential of their territory. In this novel paradigm, the efficiency of exogenous factors was by no means undermined; rather, more trust was put in endogenous factors with a view to devising a complementary system. Such solutions are now deemed vital, and nobody considers the two strategies contradictory.

The 1970s saw economic competition become ever more pronounced on a global scale, which made it essential for various territories to make optimal use of their own resources. This undeniable reality produced a brand-new phenomenon, namely the search for alternative resources (Bifani, 1999), be

it natural, human, financial, but also cultural, mostly ignored in the past. Another change concerned the perception of natural resources, which came to be considered as limited; in addition, the traditional link between development and monetary capital was questioned. Human resources, meanwhile, were given unprecedented importance. All these shifts fell perfectly in line with the theory of sustainable development, as mentioned at the beginning of this paper. In reality, this new paradigm, the immediate precursor to local development proposals of the early 1990s, was nothing other than a realisation that environmental costs were inseparable from production, a factor which until then had not been taken into account (Gómez-Pellón, 2004).

In light of the above, territory and endogenous development acquire special importance. In this new philosophy, the attitude of civil society becomes a transcendental mechanism. There have been numerous examples demonstrating that local development does not constitute a closed vision of economy reduced to a small scale but rather offers a streamlined strategy integrated with the outside world. The local dimension is embedded in the operating framework of open and complex global economy. In fact, just being local cannot be considered sufficient. The economic processes of the present day are dictated by many more interdependent variables than in the past, when the so-called world system had not yet reached the momentum it has now. It is for this reason that local development is far from being a buzzword, but neither is it a panacea – rather, its adoption is the outcome of a rational consideration of solutions necessary to adopt in the face of global-scale economy.

Although local development is not at all easy to define, there is a common understanding that it is a process of revitalising the economy and a catalyst for local society. It is implemented on the foundation of endogenous resources belonging to a territory and a community (Boisier, 2016) with the aim to create employment, boost economic growth, and improve the quality of local life. One of the theoreticians of local development, Antonio Vázquez Barquero (2015, pp. 625–638), defined it as a process of economic growth and structural change whose objective is the improvement of a local population's living standard on three planes: economic, sociocultural, and political-administrative. The economic dimension consists in creating conditions conducive to competitive productivity; the sociocultural plane refers to preserving the values dominant in the community and activating the existing local institutions; and the political-administrative domain has to do with fostering political conditions optimal for boosting the local economy and maintaining vital connections with the exterior without detriment to internal development. In short, local development requires a policy which draws maximum advantages from the local fabric while upholding a spirit of solidarity.

Loss of human capital is certainly one of the major problems affecting marginal rural areas. It constitutes the cause of the dreaded economic decline and the consequent risk of cultural extinction. However, while it is possible to mend the economy by reorienting activities and turning markets around,

cultural extinction is irreversible. It is only feasible – and not always – to preserve and recover some of the material objects produced by that culture, as records of their use are usually left behind. However, intangible culture, namely customs, traditions, ways of thinking and speaking, beliefs, etc., is lost forever when the last generation upholding it disappears. When a tradition dies, we irretrievably lose a link in the chain of cultural transmission.

4. The European Union and local development in Spain

In the recent years, the Common Agricultural Policy has been allocating copious funding to rural development programmes in collaboration with central, regional, and local administration. Since joining the European Union, Spain has benefitted greatly from the CAP policies, considering that rural areas constitute 84.2% of its territory and are inhabited by 16.4% of its population, a figure which has grown after dropping to 9% in the twenty-first century. The percentage of Spanish people living in the countryside has been falling by 0.5% every year since 2015, compared to a decrease by 0.1% in the European Union at large. Between 2014 and 2020, Spain has received the second highest amount of CAP funding in the EU, a significant sum of which (EUR 8,297.3 million) came from structural funds from the EAFRD pillar (from the total of 100,000 million budgeted in Europe). A portion of these funds has been designated for the promotion and conservation of cultural heritage in rural areas, taking into account its endogenous development potential; these actions are additionally supported by funding from private initiatives. Spain also continues to receive substantial amounts from other structural funds not related to the CAP, for instance from the European Regional Development Fund (ERDF), the European Social Fund (ESF), and the European Maritime and Fisheries Fund (EMFF), all of which are important for rural development. The money has been invested in equipment and infrastructure, with support granted to museums, documentation centres, interpretation centres, and more. Other actions taken consisted in upgrading infrastructure (road signs, street lighting, road surfacing, etc.) and rehabilitating shrines, bridges, mills, etc. Funds were also spent on promotion of tourism in the form of the publication of guides and various leaflets. Notably, only a small part of funding has been allocated to research.

The European Union launched its LEADER initiative (*Liaisons Entre Activités de Développement l'Economie Rural*, English: Links between activities for the development of rural economy), introduced to address rural development, in 1991. Fortunately, its approach and methodology have endured to the present day, even though the programme has been given different names throughout its refinement: LEADER I (1991–1994), LEADER II (1995–1999), LEADER+ (2000–2006), AXIS 4 LEADER (2007–2013), LEADER DLP-CLLD (2014–2020), and LEADER 2021–2027.

When tracing the evolution of the LEADER initiative in Spain, it is worth pointing out that between the implementation of LEADER I in 1991–1993 and AXIS 4 LEADER in 2007–2013, the number of Local Action Groups (LAGs) rose from 53 to 264, and the area covered by the programme increased from 81,855 km², 1,204 municipalities, and 1,854,305 inhabitants to 448,208 km², 7,047 municipalities, and 12,367,417 inhabitants. In other words, while LEADER I covered 16.6% of the national territory and 6.7% of the population, AXIS 4 LEADER spread to 69.3% of the national territory and had an impact on 38.2% of the population. In addition, LEADER II was combined with the PRODER 1 programme (1996–1999), and LEADER+ – with PRODER 2 and AGADER (Galician Agency for Rural Development 2000–2006) (MMAMRM, 2012). During the operation period of AXIS 4 LEADER, these complementary programmes (PRODER and AGADER) were incorporated fully into LEADER structures.

If we take a look at the current phase of the programme, we clearly see that it has been slightly stripped down, considering that the number of LAGs fell from 264 in the years 2014–2020 to 251 at present. Nevertheless, Spain boasts 9% of all 2,800 LAGs active in Europe, distributed among 61% of the total European rural population. In the years 2014–2020, 6,200 municipalities in Spain received funding for rural development under the scheme. The LEADER methodology is built upon a series of basic principles that have guaranteed its success over the years, namely: area-based approach, bottom-up structure, public–private partnerships, innovation, cooperation, networking, and integrated and multi-sectoral actions.

However, the measures taken so far to uplift cultural heritage may have been insufficient if it is to become a major factor in the dynamisation of local economies, as this paper argues. It is more than likely that the funds invested up to this point have not been enough to generate the desired pull factor. It may even be that some of the investments made in the past will have to be re-examined. In a domain as sensitive as cultural heritage, it is essential to organise actions and generate genuine plans for the interpretation of the territory. Moreover, it is well known that many local development projects related to cultural heritage have been carried out primarily with tourism in mind, which may pose serious risks to rural areas. A good example is the absurdly high proliferation of interpretation centres around the country, a true staple of development programmes in many Spanish regions. Fewer and fewer municipalities remain without one or more such establishments, many of which are low-cost projects, often of dubious utility.

It is undeniable that not all LEADER projects have been as successful as intended. In one of my previous works, I discussed the case of the district of Campoo-Los Valles, a vast rural area in the Cantabrian Mountains. In the 1990s, when the LEADER scheme was first introduced, the region was struggling with full demographic decline. Covering just over 1,000 km², it had 28,612 inhabitants in 1994, at the outset of the LEADER scheme. Between

that year and 2022, it lost more than 6,000 inhabitants. Not even Reinosa, the county capital, was spared from the decline, losing more than a quarter of the 11,786 inhabitants it had when the LEADER programme was introduced. We are speaking of a region which in 1950 had a population of 44,402 and had already lost a third of its inhabitants by the 1990s. In essence, the case of Campoo-Los Valles was no different from what was happening in other Spanish rural areas, although the process was particularly pronounced there (Gómez-Pellón, 2024). Over 50 million euros were invested in the sectors of the regional economy which needed promotion, coming from both public and private funds. However, they did not help achieve the fundamental objective, which was to stop the population decline through the creation of new employment niches. The number of people living on the 500 km² occupied by the four municipalities of Los Valles decreased from 3,279 to 2,214 between 1994 and 2022. In 1950, these four municipalities had 10,151 inhabitants.

Today, following the implementation of the LEADER scheme, this extremely rural area in the Cantabrian Mountains, whose population density in certain places is below 5 inhabitants per square kilometre, continues to face major struggles in terms of its territorial structure, and some problems seem to have aggravated. Depopulation has progressively joined forces with an ageing population, growing masculinisation rate, and consequent bachelorhood, giving rise to general concern. The only indications of social and economic sustainability of this declining rural area are the growingly common practice of younger residents who work outside the region commuting back to their hometowns, periodic returns of former residents and their families spending holiday seasons in their second home, and tourism motivated by the local natural and cultural attractions (Gómez-Pellón, 2022). What fate would have awaited the region had it not been subjected to rural development efforts under the LEADER methodology? Possibly, the decline would have been much greater, and the future would be even more uncertain. From this point of view, while the LEADER initiative has not lived up to expectations, for the time being it has nonetheless served as a palliative measure.

Furthermore, we are all aware of the effect administrative boundaries exert on local development plans. Plans set in motion by LAGs have certainly adhered to municipal borders, but their activity has at times crossed or spilt over these lines on the county scale, creating what we might call para-judicial borders which coincide with the territories in which each LAG operates. This explains why these borders, be they juridical or para-judicial, have become the unbreachable limits of local development maps, which works to the detriment of their effectiveness. It makes no sense that a path should be cut by an administrative line, especially if it is purely referential, serving to separate a county benefitting from a development programme from a neighbouring county yet to be included in the scheme. This does not mean that there has not been any type of cooperation between counties with active LAGs and the administrative units which surround them, but rather that when such cooperation took

place, it did not follow the principle of rationality and generally contributed to reinforcing the division between spaces rather than fusing them.

As a complementary point, we may add that there have been several instances in which the value of the associative fabric serving to support local development has been questioned. It is clear that associative fabric is essential for development, but only when it has been constituted efficiently and when it has the capacity for regeneration. Being the soul of local development, associative fabric must be the very expression of the life of the community and not a vehicle for gain, serving spurious interests, either political or financial. Efficient associative structures demand adherence to democratic and not authoritarian principles, transparent and not opaque management, as well as independence and not servility to opportunistic schemes. Local development requires sustainability, which certain projects do not take into account despite the general community consensus underpinning these development initiatives. On occasion, this results in bitter criticism and general discontent among the community.

Local development implies positive transformation of a territory (Becattini et al., 2002). It needs to be carried out through a series of multidimensional actions taken by public administrations and private actors. Each of the actors in local development has their own role to play. This means that they need to reach an understanding on specific actions through a harmonious relationship, not through an apparent fusion. Aspects such as financing projects, the viability of their execution, or coordination of competences demand the commitment of all participating actors. The implementation of projects requires efficacious management on the part of the local development agency, or in this case, of a Local Action Group. Local development strategies become especially important in the case of countries like Spain (or France), where local associations have a much smaller range of functions and competences than in countries with a more decentralised institutional structure, for example in Scandinavia, Central Europe, or the United Kingdom. Consequently, while in Nordic countries, as well as in Denmark and the Netherlands, local organisations have traditionally been able to intervene in areas critical to local life – and not just education and health, but also employment and economic growth – the lack of comparable competences on the part of Spanish and French associations has made local development policies an even more crucial instrument.

Local Action Groups are set up with an ingenious formula. Uniting public and private social actors, they form a balanced platform; they also constitute legal entities, operating as non-profit organisations. Their structure facilitates implementing their strategy, since the executive body is separate from the management structures. While the former, namely the Executive Committee, is responsible for day-to-day activities, correctly applying funds, offering advice to entrepreneurs, etc., the management organ makes decisions concerning development programmes. The latter is seen as the nuclear unit of the LAG

from the local viewpoint, as its obligations include the stimulation of citizen participation and intermediation with institutions and administrations.

On many occasions, LAGs have proved to represent a very mature and evolved concept within the theory of local development. They depart from a model in which the population is merely a passive recipient of aid schemes established and executed by the administration. Instead, the new strategies operate as support systems with a participative character, capable of embracing trends within society and giving space to community associations and organisations. Considering that the processes of endogenous development affect all threads in the socioeconomic fabric, they necessarily need to involve the entire civil society. In this sense, it is vital that development projects are participative and accepted by the collective. They should also be based on partnership and synergies between all actors important for the local life (Pellegrin, 1987; Pecqueur, 1988). This was precisely the philosophy that stood behind the LEADER methodology from its outset. In the past and presently, its theoretical foundations rest on the premise that it is the locals residents, through their expressly constituted representatives, who manage the funding, drive support for the projects, and take responsibility for participative rural development.

5. Conclusion

Local development as a framework for action has been progressively consolidated in the last decades, undoubtedly thanks to the results that it has generated. Additionally, the convergence of municipal policies with local development, which has resulted from aid and assistance of all kinds, is generating great expectations. The ultimate goal of such actions is to improve the productive and social landscape of rural areas, seeking to increase the residents' quality of life and boost the local economy as much as possible. Because of this, local development strategies are of particular importance in mountainous areas, where they may become a genuine lifeline. Large-scale rural development programmes, in this case implemented by the so-called Local Action Groups, constitute one of the best polished products of these community policies. They owe their shape to the European experience accumulated since the early 1970s, when the United Kingdom set in motion local development programmes in order to revive the declining – in fact almost inexistent – rural economy in Wales, Scotland, and other areas. One of the insights gained along the way was that local development programmes introduced by agencies for local development or similar institutions are welcomed much more warmly when they activate genuine local actors. The work of such agencies has proved to offer an invaluable development instrument, as evidenced by the more than two hundred European regions that have benefitted from it in recent times.

The outcomes of implementing programmes based on the LEADER methodology in Spain demonstrate that it offers an extraordinarily valuable strategy

for local development in its territorial dimension. The improvements made in the rural environment, which often includes local cultural heritage, have generated important revenue in the last three decades. This said, if we assess these changes from a territorial perspective, it is clear that the development has been far from homogenous. While demographic exodus has been halted in some areas of Spain – and at times, the trend has actually reversed – there are still many regions where local development policies have not produced the desired results or failed to meet their basic objectives, with some places still undergoing a gradual decline. However, even in such cases, we can assume that rural development has managed to slow down this downward trend. At the same time, it should be noted that the demographic retention achieved in some areas may have not been entirely thanks to the implementation of rural development programmes but also resulted from a diverse range of coinciding factors.

The central idea of this paper, in the light of the above discussion, is that cultural heritage can and should be an instrument of local development, especially in mountain regions and all marginal areas struggling with greater obstacles to growth. There is no doubt that even the most dynamic rural areas face structural changes brought by international trade. In these cases, cultural heritage is an extremely important resource, as it may be conducive to economic diversification, especially in regions whose economies have historically relied exclusively on agricultural activity. In mountain areas whose resources offer a very limited set of alternatives, meanwhile, the inherent value of cultural heritage may serve as a protective shield against the cultural homogenisation brought about by globalisation and a tool for promoting unique local identity, which may help prevent the demographic and social extinction looming over such areas. Rural areas have great potential for economic reactivation thanks to their agricultural traditions and rich tangible and intangible heritage. By enhancing their endogenous resources, it is possible to grow cultural and natural tourism in such regions and promote them as a great tourist attraction.

Experiences from other parts of Europe have proved that cultural heritage is a splendid antidote to loss of identity. In the case of Spain, disappearance of traditional culture is one of the most tragic consequences of depopulation and the ageing of populations in marginal areas, resulting from the lack of essential demographic vigour and social cohesion inherent to identity processes. It is precisely cultural heritage that contains many of the symbols of the local identity. It has the potential of activating the cultural references which may give a boost to declining rural communities, and this process may take place either spontaneously or with the implementation of rural development programmes. A strong feeling of local identity among the remaining inhabitants, complemented by those who live elsewhere and return periodically and reinforced by economic revival, could serve as an impulse for these rural communities to shake off the lethargy that threatens their existence.

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ABSTRACT

Sustainable models of territorial development: from local development to rural development in the case of Spain

The 1980s marked the expansion of local development in Spain, often interpreted as a microspatial manifestation of regional development, in its endogenous modality. Local development is a form of territorial development with a defined spatial basis: regional, county, or local. The relative novelty that characterised the Spanish local development in the 1980s resulted from a greater emphasis on local economic policies and from the principal focus put on regional rural spaces, sometimes even on small towns. In this way, local governments progressively became the champions of local development. This model would pave the way for European rural development programmes, the best example of which would be the LEADER programme, running since 1991. We can conceptualise rural development as one more variant of local development. Its territorial approach and its bottom-up philosophy, already very much present in local development initiatives, would steer its course firmly towards the empowerment of local resources. Among these, a privileged place would be given to cultural heritage. The fact that this territorial approach would over time spill over to territorial planning and the European Spatial Development Perspective (1999), which seeks to fall in line with sustainability goals, is a mark of its success. It explains why the LEADER methodology is still in force three decades after its emergence, with Spain being a notable example of its application.

Keywords: territorial cohesion, sustainable development, participatory local development, rural development, cultural heritage, Spain

ETHICAL DIMENSION OF REBOUND EFFECTS IN INTEGRATIVE CIRCULAR TRANSITION: INSIGHTS FROM THE FOURTH SECTOR IN CHILE*

Małgorzata Pusz¹

1. Introduction

Circular economy (CE) challenges the traditional linear economic development model by extracting the highest possible value from resources through their recirculation, thus going beyond the production–consumption paradigm of goods and services. In viewing waste as a resource, eliminating the use of toxic chemicals and minimizing resource inputs, emissions, and energy leakage, CE involves “slowing, closing, and narrowing material and energy loops [...] through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling” (Geissdoerfer et al., 2017, p. 6). CE is also portrayed as a concept that “minimizes incineration and landfill; is regenerative and restorative by design; operates by default on renewable energy; maintains resources at their highest value at all times; inherently has a higher complexity than linear transactional value chains; and thus embeds a potential to decouple growth in the extraction of virgin resource from monetary growth” (Sönnichsen & Clement 2020, p. 2). Those processes are enabled through eco-design and circular business models. Apart from environmental benefits, circular business models are predicted to offer new and decent employment opportunities whereby human labor is highly valued.

While CE has received a lot of attention in the broad field of industrial transformations and business development (Korhonen et al., 2018), the current discourse primarily refers to its physical and resource-related economic dimension. Its social and ethical aspects, such as social inclusion or social well-being, are rather absent from the existing conceptualizations (Hobson

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& Lynch, 2016; Murray et al., 2017; Ranta et al., 2018; Mies & Gold, 2021). While the leading global companies have begun to incorporate CE principles into their strategic plans, their approaches do not substantially challenge or transform the prevailing paradigms, especially with regards to consumption patterns (Hobson & Lynch, 2016). Adoption of CE thinking among companies remains motivated primarily by cost-cutting and seeking competitive advantage rather than by purely environmental considerations (Lacy & Rutqvist, 2016). This is where attention should be paid to the emergent Fourth Sector, which encompasses hybrid enterprises – i.e. those that have a social and/or environmental mission while employing mainstream business/market-based policies and practices (thus being, at least to some extent, financially independent, unlike the majority of third-sector organizations) (Sánchez-Hernández et al., 2021). Examples of such hybrid enterprises include social enterprises (SE), which represent a more blended approach to CE discourse by reinvesting profits in socially integrative circular projects addressed to disadvantaged groups. Framed as “diverse circular economic spaces in the making” (Lekan et al., 2021), SEs can promote circular practices such as reuse, repair, refurbishment, rental, remanufacture, local resource sharing, and recycling (e.g. clothing swaps, second-hand markets, repair cafés) (Lekan & Rogers, 2020). Although it remains debatable whether SEs significantly influence private companies to rethink their conventional business models in a circular fashion, they help to enrich CE with a social dimension and may assist private companies in boosting their corporate social responsibility (Lekan et al., 2020, 2021).

When investigating CE transitions, it is also important to account for any rebound effects (Zink & Geyer, 2017). These refer to a “reduction in expected gains from new efficient technologies due to changes in people’s behavior or the necessity to keep producing new products” (Kopnina, 2019, p. 613). The term also describes the situation where a specific advancement ends up being utilized to such an extent that it exceeds the savings in a specific field, e.g. economic, mechanical, energetical (Berkhout et al., 2000; Pologea, 2023). Overlooking rebound effects associated with CE practices can lead companies to overstate their environmental performance and greenwashing practices (Zerbino, 2022). While there is a growing body of research on rebound effects associated with CE practices (Chen, 2021; Zerbino, 2022; Zink & Geyer, 2017), few studies have tackled their social and, in particular, ethical dimension. Consequently, the present paper employs a multidimensional approach to rebound effects in order to unveil ethical tensions underpinning CE practices. In so doing, it adopts the lens of *local-to-global circuits of value*, which helps to better uncover circulation of resources across mainstream and alternative economic spaces. Scrutinizing the resultant links/circuits makes it possible to explore the extent to which material circuits in CE are ethical and moral (cf. Gregson et al., 2015).

The article is organized as follows: first, it introduces the concept of circular rebound effects. Next, it explains the relevance of employing the concept of circuits of value to unveil ethical tensions underpinning circular rebound

effects in the context of the Fourth Sector's SEs. The second section provides contextual information on CE and SEs in Chile and describes the methods used. The third section presents and interrogates research findings in the light of relevant concepts and theories. Finally, this study concludes by reflecting on how studying rebound effects might help to advance research on CE and inform discourses and practices that support socially integrative CE transitions and attendant material flows of resources and circuits of value.

1.1. Circular multi-dimensional rebound effects

In CE, waste is viewed as a resource, the use of toxic chemicals is eliminated, and resource inputs, emissions, and energy leakage are minimized due to the processes of “slowing, closing, and narrowing material and energy loops through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling” (Geissdoerfer et al., 2017, p. 6). Whilst CE practices such as upcycling, remanufacturing, refurbishing, or reuse of materials are associated with many social and environmental benefits (e.g. in terms of job creation), it is also crucial to account for negative rebound effects whereby CE practices fail to deliver on their promises (Zink & Geyer, 2017).

As defined above, rebound effects describe the situation where a specific advancement ends up being utilized in such great measure that it overcomes the savings in a specific field, e.g. economic, mechanical, energetical (Berkhout et al., 2000; Pologea, 2023). This definition should be, however, broadened to encompass social aspects, e.g. organizational changes (or lack thereof, so that companies continue to produce new products), or workers' and consumers' rights (that may be negatively affected). Specifically referring to CE, rebound effects should consider “lifecycle thinking” that encompasses phases such as product maintenance, repair, and recycling rather than just use and consumption, the latter largely being focused on energy and material aspects whilst overlooking the social dimension (Chen, 2021; Font Vivanco et al., 2016). Behavioral aspects whereby expected gains from new efficient technologies are undermined due to changes in human behavior should be likewise incorporated into studies on circular rebound effects (Kopnina, 2019). Recognizing social elements of circular rebound effects is even more important considering the emerging body of research on the social dimension of CE, including research on circular and sustainable cities (Pusz, 2023). Given that there are ethical implications to the broader environmental rebound effect related to the inability of a given circular practice to bring environmental benefits in terms of displacement of, and substantial decrease in, the primary production (Font Vivanco et al., 2016; Siderius & Poldner, 2021), these should be likewise put under scrutiny. Therefore, although there is a growing body of research on rebound effects associated with CE practices, this article advances the current CE discourse by considering the social and ethical dimensions and implications of rebound effects. In so doing, it explores what changes brought by

SE-led integrative CE (may) lead to rebound effects that are broadly understood as unsustainable outcomes of their practices, be it direct or indirect. It also questions the extent to which those practices are truly socially integrative.

1.2. Circuits of value: an analytical arsenal to unveil socio-ethical rebounds in circularity

A novel approach to uncover any ethical issues underpinning rebound effects in CE builds upon the concept of *circuits of value* (Lee et al., 2004). This concept originates from the research on diverse economies (Gibson-Graham, 2008) in the discipline of economic geography and refers to material and social pathways around which values attached to a given resource circulate and are then (co-) produced, transformed/exchanged, and consumed through relevant economic activities (Lee, 2006). Such circulation of a given resource is illustrated in Figure 1, which illustrates the mosaic of alternative diverse economic spaces through which people produce, exchange, and distribute materials and resources both within and outwith the mainstream capitalist socio-economic system. Many of the non-mainstream economic activities can be defined as inherently

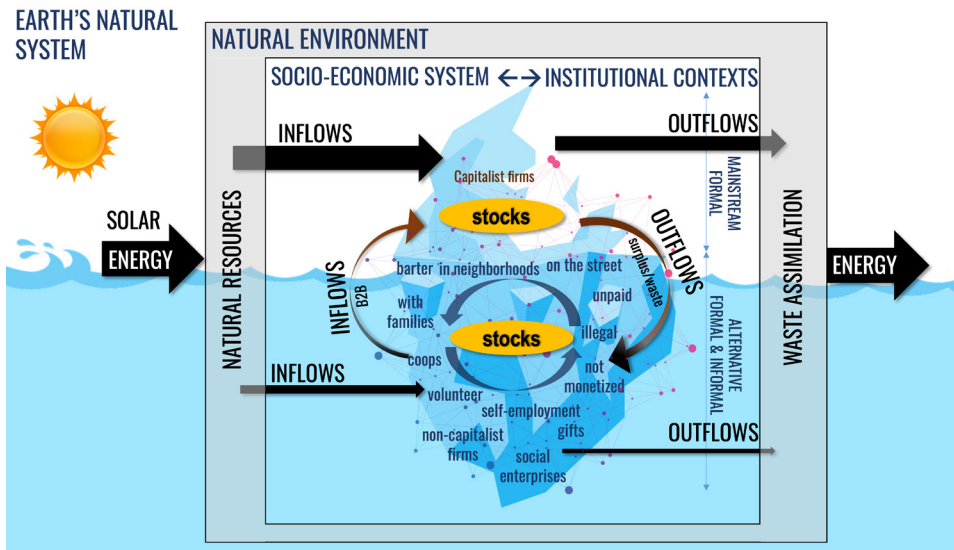
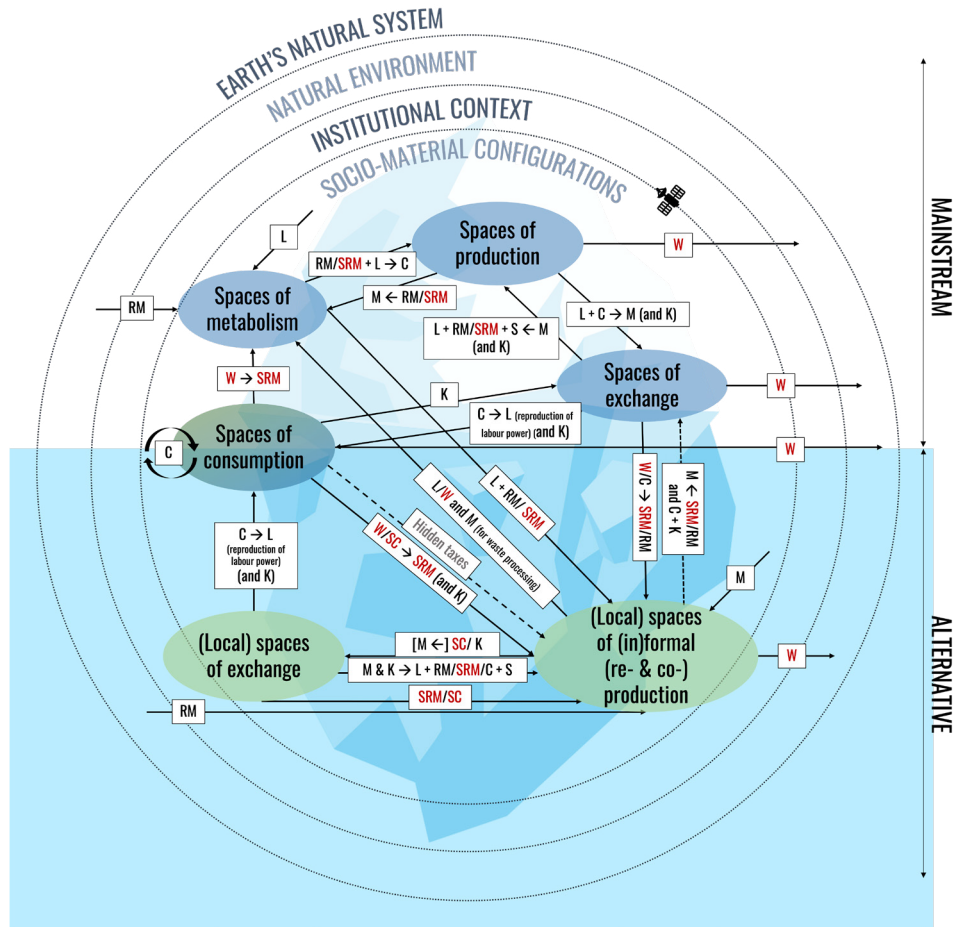


Figure 1. Resource flows across the mainstream and alternative economic spheres: a heuristic framework

Description: “Energy” arrows reflect energy flows through the biosphere. “Inflows” arrows imply inflows of extracted natural resources to the socio-economic system. “Outflows” arrows imply outflows of resources (pollution, waste) from the socio-economic system back to the natural environment. The “stocks” indicate stocks of human, financial, social, and natural capital. The curved arrows between the mainstream and alternative spaces imply resource exchanges enabling CE.

Source: Lekan et al. (2021) after Community Economies Collective (2021), Laurenti et al. (2018), and Haas et al. (2005). Diverse Economies Iceberg by Community Economies Collective is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License

circular because they may incorporate diverse and everyday CE practices – *diverse circular economies* – promoted by SEs. As mentioned earlier, these include reuse, repair, refurbishment, rental, remanufacture, local resource sharing, and recycling (e.g. clothing swaps, second-hand markets, repair cafés) (Lekan & Rogers, 2020).



Legend:

- SRM** - secondary raw material (upon being revalorized)
- RM** - raw material
- W** - waste including surplus (unsold) materials (that may be subject to revalorization)
- C** - commodity (product of use value for sale that may contain upcycled materials)
- SC** - secondary commodity
- L** - labour
- M** - money
- [M]** - optional monetary transaction
- S** - space (fixed capital such as built environment; related to maintenance costs)
- K** - knowledge

Figure 2. Heuristic framework for mapping circuits of value in the social enterprise-led local development of the circular economy

Source: Pusz, 2023 (after Lee (2013) and Community Economies Collective (2021))

Figure 1 also shows how alternative economic spaces can become sinks for resource outflows from the mainstream by capturing and managing globalized stocks locally. The same locally reproduced resources may be transposed back to the mainstream where they may be managed globally. The subsequent Figure 2 illustrates in more depth how *global-to-local circuits of value* are being formed through, and shaped by, interactions across mainstream and alternative economic spaces. These circuits are being continually reconfigured by social relations and embody diverse conceptions of value that may include both capitalist (i.e. market-based) and non-capitalist/extraeconomic (e.g. social and environmental) values. As Hudson (2004, p. 462) noted, “[...] economic processes must be conceptualized in terms of a complex circuitry with a multiplicity of linkages and feedback loops rather than just ‘simple’ circuits or, even worse, linear flows”. The same principle can be found in CE; however, the CE-related concept of value itself needs to be expanded to encompass its diverse material, social, ethical, and spatial forms and their constituent circuits. Figure 2 additionally recognizes the institutional environment, which may likewise influence the shape of circuits of value. By embedding non-capitalist values, the concept of circuits of value goes beyond the notion of a labor-value and commodity-value (attached to a given resource circulating across spaces of consumption, production, and exchange) as solely being exchanged into monetary prices/wages, i.e. “exchange value”.

1.3. Motor of Integrative Circular Economy: The Fourth Sector

The emerging Fourth Sector represents hybrid enterprises – i.e. those that blend social and/or environmental mission and employ mainstream business/market-based policies and practices, thus being, at least to some extent, financially independent unlike the majority of third sector organizations (Sánchez-Hernández et al., 2021; Figure 3). Interoperability is indicated as an essential factor enabling the Fourth Sector to achieve its full potential through synergistic connections between diverse actors forming a supportive ecosystem for “for-benefit” enterprises to thrive and drive positive social changes (Fourth Sector Group, n.d.).

Exemplary entities associated with the Fourth Sector, demonstrating the progressive crossing and interlocking of boundaries across public, private, and social sectors (Gutberlet et al., 2016), are social enterprises (SEs). SEs are usually founded in the first place to deliver a social/environmental value (rather than profits). They differ from traditional non-profits by having a trading arm and being, at least to some extent, financially independent from external funds. SEs generally seek to maximize social impacts and create positive externalities by reinvesting profits to fulfill a social and/or environmental mission (Longhurst et al., 2016). In line with this, they are crafted to respond to, and cope with, diverse and intractable social fractures and environmental dilemmas such as homelessness, unemployment, social exclusion of women, or piles

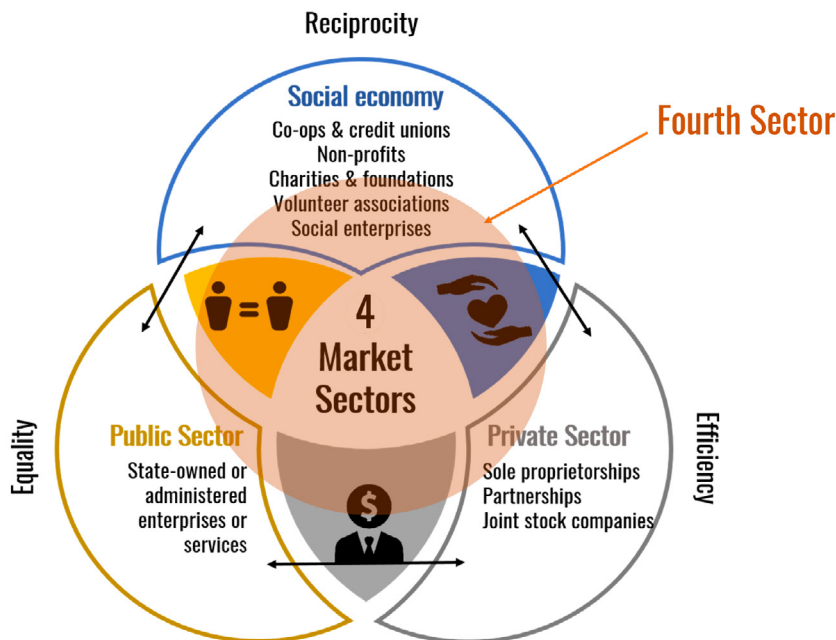


Figure 3. The four sectors of the economy

Source: Pusz, 2023; own elaboration after Lewis (2006) and Fourth Sector Group (n.d.)

of (non-)biodegradable waste (Dart, 2004; Sud et al., 2019; Vickers, 2010). They also often represent a form of an “alternative economic praxis” that is supposed to “affect the (national) economy as a whole, reflecting in turn a conception of an associated social whole”, whilst remaining an “economic circuit in its own right” (Amin et al., 2003, p. 29). Although SEs are often portrayed as ethical bedrocks of social economy, ascribing them to the Fourth Sector highlights how it is increasingly difficult to distinguish SEs’ behavior and operations from conventional businesses strongly focusing on corporate social responsibility (CSR). This is because SEs are deeply entangled in market dynamics and increasingly adopt business-like models in order to survive and/or prosper/upscale (Friedman & Miles, 2001; Vickers, 2010; Bridge et al., 2014; Peattie & Morley, 2008).

The definition of an SE is thus fluid and contested. In this study, the discussed CE-facilitating SEs are primarily small *commercial enterprises* (cf. Bolton et al., 2007), some of which include *solo-entrepreneurs/sole traders*. Although sole traders are entitled to keep all profits after tax has been paid, in this study their businesses are referred to as SEs because they produce and sell items that hold social and/or environmental value (e.g. they may eliminate toxic materials or upcycle wasted materials). This research also adopts the term *integrative CE* to indicate the integration of production and consumption processes of products and services that embody CE-thinking with those that support participation of

disadvantaged and socially excluded groups facing unequal access to financial resources and opportunities (e.g. housing) (Pusz et al., 2023). Such activities may empower those individuals, improving their livelihoods, and help to extract the highest possible value from resources through their recirculation, including upcycling and generation of performance-oriented products and services. Nonetheless, it is important to account for any circular rebound effects associated with SEs.

2. Methodology

The findings reported here draw upon 13 case study social enterprises (SEs) from Chile (12 SEs from Santiago and 1 SE based in Viña del Mar, located ca. 78 miles away from Santiago). Those findings stem from a broader research project which investigated the role of SEs, their socio-spatial networks, and value-impact scaling pathways in the local development of CE in the UK, Austria, and Chile (see Pusz, 2023; Cresting, 2024).²

Chile is considered the top CE frontrunner in Latin America, especially after the introduction of the UNEP-coordinated Circular Economy Coalition, launched at the XXII Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean and bringing about a vision of regional CE based upon cross-country collaboration (UNEP, 2021). Crucially, Chile has the largest number of CE-related public initiatives in the region. First, there is a CE unit within the Ministry of the Environment which works closely with the state economic development agencies: Production Development Corporation (*Corporación de Fomento de la Producción* – CORFO) and the Sustainability and Climate Change Agency (*Agencia de Sustentabilidad y Cambio Climático* – ASCC). Such close inter-agency ties have led to the creation of a CE roadmap and a financial support scheme for developing and upscaling social and CE-related initiatives, such as those offered by start-ups and SEs (Schröder et al., 2020). Second, Chile introduced, under the landmark Framework Law No. 20.920 (“The Bill”) “Waste Management, EPR, and Recycling Promotion”, a mandatory EPR scheme for oils and lubes, electric and electronic devices, batteries, containers and packages, tires, AA batteries, and newspapers and magazines due to their high volume and absence of channels to recycle them in Chile once the product’s useful life is over (Bünemann et al., 2020). The Bill also established targets for collection and recovery of (non-)household packaging waste. There is also the National Program on Sustainable Consumption and Production, which resulted in the creation of the National Action Plan on Sustainable Consumption and Production (2017–2022) and involves construction, industries, and sustainable lifestyles sectors (Gobierno de Chile, 2016). Moreover, the Chilean Ministry of

² In fact, that broader research project encompassed more SEs than those studied for the purpose of this article.

Environment and Fundación Chile introduced in 2018 the Chilean Plastics Pact (*Circula El Plástico*) to foster recycling, reuse, and composting of at least one third of household and non-domiciliary plastic packaging and to ensure that plastic containers and packaging contain at least 25% recycled material (Circula El Plástico, 2022). Linked to this, in 2018 Chile banned the commercial use of plastic bags under Law No. 21.100 (BBC, 2018). There are also plans to develop deposit return schemes for packaging and plastics (Lührmann, 2024).

Although Chile is one of the most developed countries in Latin America, it has the second worst distribution of wealth/income inequality in the entire region – it is estimated that the richest 10% of the population earn almost 50% of the national income (Orejas & Buckland 2016). The violent social unrest (*Estallido Social*) that began in October 2019 was the outcome of these inequality levels, in addition to high living costs and privatization (Laing et al., 2019). Chilean protests thus only highlighted that CE initiatives should be aligned with goals to reduce inequality and poverty. Therefore, it is highly relevant to scrutinize mission-driven SEs in the context of CE.

SEs in Chile are often non-profit organizations that intend to introduce for-profit trading activities that have a social impact; start-ups that have a social and/or environmental objectives from their inception; and businesses with a social mission that rather resemble a private enterprise as they do not necessarily prioritize social/environmental mission over profit maximization, an example being LATE – the first officially designated SE, founded in 2003 (Orejas & Buckland, 2016). In 2007, a new legal entity type was introduced in Chile – stock company (*Sociedad por Acciones* – SpA), broadly denoting social entrepreneurial ventures. In this study, stock companies constitute the majority of the interviewed SEs. They are generally characterized by a relatively low administrative burden as compared to a limited company (i.e. requiring at least USD 1 of share capital, 1 shareholder, and 3 directors) and free flows of capital, which is divided into shares (as it is in case of corporations). Such enterprises may also be labelled as “B corps” through the *Sistema B* global network of entrepreneurs that entered Chile in 2012. Other legal entity types representing SEs in Chile are foundations and hybrids of foundations and stock companies, whereby a percentage of the company’s profit can be donated to the foundation (Orejas & Buckland, 2016). Overall, there is no official legal structure for SEs despite efforts made by support entities such as *Sistema B* to propose a more standardized conception of the various types of SEs and legal frameworks which would represent them to attract more private investment.

2.1. Interviews

This article draws upon research findings from a broader research project that encompassed interviews with representatives of 18 Chilean SEs (see Pusz, 2023). From among those, this study is built upon the findings from

13 interviews. Six interviews were conducted in person with representatives of SEs during a 10-day stay in Chile in March 2020, and seven interviews were conducted online via Zoom due to the global circumstances associated with the COVID pandemic (see Table 1 for an overview of the SEs). The SEs were primarily identified through contacts with the representatives of support infrastructure organizations (e.g. Fundación Basura Zero or Desafío Levantemos Chile) found via online search engines, as well as through browsing online search engines and gathering referrals from organizations initially contacted. The interviewed SEs were then selected based on the following criteria: (1) sectoral characteristics (including environmental/CE and social orientation); (2) size in terms of the number of employees; (3) variegated stages of organizational development; (4) market (e.g. community-based vs. individualist/commercial); and legal status (mainly stock companies and foundations). This article additionally mentions two foundations (hence organizations that are more likely to represent the Third Sector rather than the Fourth Sector due to their high dependence on external funding) because of the interesting insights that can be applied to companies in the Fourth Sector (performing similar activities).

The interviews lasted approximately 40 to 80 minutes and were organized around the following key areas: (1) the SEs' historic background, motivations, mission, experiences, and activities; (2) their embeddedness within the city and local community; (3) organizational/legal forms; (4) their knowledge of CE practices and policies; (5) opportunities and challenges associated with existing activities, networks, and alliances (e.g. with mainstream organizations); (6) SE mission and vision of the future, including potential scaling strategies; and (7) the broader regulatory, socio-economic, environmental, and financial contexts in which SEs are embedded. Those areas go beyond the scope of this study because they underpinned the broader research project (cf. Pusz, 2023). The interviews provided a detailed understanding of the functioning of selected SEs in terms of mobilization of human capital, financial capital, and material resources.

Semi-structured interviewing helps to uncover what lies behind any underresearched phenomenon (Strauss & Corbin, 1990). This is because the method makes it possible to obtain in-depth qualitative data which have high explanatory potential and help to promote reflexivity and rigor (Rubin & Rubin, 2011). Semi-structured interviewing enabled us to obtain subjective and in-depth data (e.g. subjective perceptions of respective partnerships) and construct informative narratives (Graebner et al., 2012). All the interviews were recorded and transcribed. Some interviews were conducted in Spanish, but only the quotes cited in this study were translated into English. All the research participants were provided with a consent form drawn up under the guidelines of the Ethics Committee at the Faculty at the University of Hull. The researcher complied with the set of rules on research and integrity.

Table 1. Overview of the SEs incorporated in this study

Name of organization	Registered type of organization	Sector (predominant)	Brief overview of performed circular activities	Brief overview of social inclusion aspects
Prana Sopas	SpA	Food	Make soup for sales in reusable glass jars	/
Súper Justo	SpA	Food	Trade food products without packaging (it is a zero-waste shop)	/
Don Pallets	private company	Furniture	Make and sell wooden items from reclaimed wooden pallets	Offer workshops for individuals with disabilities
Ecocitex	SpA	Clothing & other textiles	Recycle clothes and then sell skeins of yarn or products made from recycled clothes	Employ former ex-offenders
Uniformes Recicladados	private company	Clothing & other textiles	Sell second-hand clothes	/
Tedoy	foundation	Clothing & other textiles	Sell second-hand clothes and run clothes swaps	Run social events in local communities
Miss Moon Reutilizables	SpA	Clothing & other textiles	Make and sell reusable sanitary pads	Future: willing to run workshops in deprived communities
Biorigen	SpA	Hygiene	Sell toothpaste in reusable glass jars	Future: willing to run workshops in deprived communities
Emporio Natural	private company	Hygiene	Make and sell shampoo bars	Offer workshops to individuals with disabilities
Freemet	SpA and certified B corp	Detergents	Sell detergents in returnable packaging	Occasionally donate products to deprived communities
Plastic LUP	private company and certified B corp	Arts & Crafts (plastic)	Offer artisan products incorporating filaments from recycled plastic cups	Offer trainings to artisans who make items such as baskets and can incorporate recycled plastic into their items

Name of organization	Registered type of organization	Sector (predominant)	Brief overview of performed circular activities	Brief overview of social inclusion aspects
Triciclos	private company and certified B corp	Mixed/Other	Offer recycling services (including municipal waste collection points)	Provide informal waste recyclers with formal work contracts (formalize the informal sector)
TECHO Chile	foundation	Construction/Housing	Offer emergency housing services incorporating insulation panels from Tetra Pak	Support those in precarious living conditions or those escaping natural disasters

Source: Own elaboration

2.2. Mapping

This research also incorporated a visual method of mapping inter-organizational flows of (in) tangible resources to/from a given SE. While such visual methodologies are generally associated with the promotion of a participant-centric



Figure 4. Resource mapping session with an entrepreneur from Santiago, Chile

Note: Different colors of sticky notes indicate different types of sectors (e.g. public, social, private).

Source: Photograph taken by the researcher in March 2020

approach (cf. Striepe, 2021), in this study the researcher largely mapped resource flows (materials, labor, money) between respective actors by herself during the interviewing process. This was due to interviewees' limited time and restrictions imposed by the circumstances associated with the COVID outbreak. There were, however, some exceptions whereby interviewees used sticky notes to map stakeholders associated with their activities (Figure 4). In the latter case, such mapping offered the lens of relational reflexivity, which made it possible to reflect upon "the material arrangements and their social meanings in how collective sense making and action emerges" (Allen, 2008, pp. 7–8) in the organization. In any case, mapping of resource flows helped to unveil the circulating resources and structural properties of the SEs' individual connections to external actors. This, in turn, made it possible to unveil circuits of value and underlying ethical tensions.

3. Findings and discussion

In Chile, large enterprises steal the show, while small enterprises do a lot of great and important things (Interview with an SE representative, March 2020).

In aligning the CE concept with circuits of value surrounding the chosen SEs' practices, the research findings uncover rebound effects and associated ethical tensions that need to be considered if transition towards a truly integrative CE is intended. This section is structured around the following key ethical issues underpinning rebound effects that were delineated based on circuits of value of the respective SEs: workers' conditions; environmental issues; questionable corporate social responsibility (CSR); and gender aspects.

3.1. Rebound effects vs. human recovery and/or resource recovery?

Research findings reveal that many of the second-hand/surplus materials that SE employees work with may already embody low labor costs that compensate neither for potentially precarious working conditions nor for unfair wages. Such issues are often mentioned in the context of low-income countries of the Global South (Wright, 2006). In any case, it is important to explore the workers' conditions, which go beyond ascribing value to a commodity based on the time and amount of work spent on producing it (Lee, 1993).

Some SEs, such as Ecocitex, employ socially excluded groups, e.g. female ex-offenders, who may work for low wages, yet the prices of the final goods they help to produce are relatively high. While high prices may lead to a decreased resource consumption, there is a rebound element in terms of exclusion of consumers with lower income elasticity, notwithstanding their growing social and environmental awareness. Importantly, since the utilization

of mainstream “waste” effectively lowers production costs, there may be concerns as to whether the employees are subject to some sort of exploitation (which constitutes another social rebound effect). The relatively low financial gains are, however, unlikely to be the primary reason why employees join such (in fact, short-term) projects. Many of them merely seek opportunities to become better integrated into the (host) society. One could say that, in an ideal case scenario, workers would be paid for hours spent on making a product rather than receive a fixed salary for the final product regardless of increases in the overall operating costs. Nonetheless, this would require making a trade-off between remaining faithful to SEs’ core mission of socially and personally (rather than strictly financially) empowering many individuals – and growing in size to increase the volume of sales (and accumulate more capital to increase wages). The latter would possibly involve producing cheaper goods of lower quality, for profit, and on a mass scale, thus possibly triggering a rebound effect in terms of allowing consumers to make greater financial savings and then use them to unsustainably increase resource consumption in another area (although not necessarily). In any case, there is a need to strike a balance between pursuing a mission and trading goods. For example, Plastic LUP intends to empower artisans to be able to produce fibers from recycled plastic cups and sell the end products – both by themselves. In a similar fashion, the CEO of another SE admitted that she does not intend to grow too big and “be rich”, because she would prefer to, instead, “give employees the opportunity to employ other people to make it worth it in case they have knowledge on CE” (Interview, March 2020).

This wide array of social benefits associated with labor-intensive practices are in line with the observations of Rowan et al. (2009, p. 10), who noted that resource recovery “is as much about the human recovery as it is about material resources”. Some SEs also intend to formalize informal work agreements with workers such as tailors and sewers. This could potentially help to avoid a rebound effect associated with a weaker social safety net in case those workers are not subject to any social protection.

On the other hand, resource recovery and management practices such as those at Triciclos’s premises involve work with toxic materials from the mainstream waste stream. This is where a rebound effect affecting workers’ health and safety may occur, hence requiring to be monitored. To some extent, one way of tackling it would be to formalize contracts with informal waste collectors – something that Triciclos has been doing. This has enabled Triciclos to additionally complement its operations and benefit users of local recycling stations by ensuring a profound level of interaction between waste recyclers and local communities. In such interactions, local residents are taught how to properly dispose of waste, which helps to mitigate health issues in the subsequent stages of the waste management system and discard negative connotations associated with waste collectors.

3.2. Environmental ethics vs. rebound effects

Circulation of materials raises questions related to environmental ethics. Since many of the second-hand materials used in SEs have already circulated through Global Production Networks (GPNs) (cf. Coe et al., 2008), some of them not only carry negative carbon footprint but may also be composed of raw materials that were extracted without regard for the natural environment. The use of those materials may be thus indirectly contributing to irreversible ecosystem alterations, revealing how capital can subsume nature (Hudson, 2005). On the other hand, recirculating materials is better than having them abandoned, that is unless SEs are not indirectly involved in resource extraction.

Second-hand materials are not the only goods to circulate through extra-local spaces of production. For example, Biorigen offers toothpaste in glass jars which, although reusable, are imported from China. This is because the entrepreneur is unable to source them from Chilean providers (unlike Prana Sopas, selling soup in reusable glass jars) as she only needs them in a small quantity. Whilst glass jars are reusable (and the CEO of Freemet seeks to develop durable glass packaging for detergents to replace plastic packaging), a more ethically sound solution is proposed by zero-waste shops, which have indirectly benefitted from laws prohibiting supermarkets from providing plastic bags (e.g. Chao Bolsas Plásticas under Law No. 21.100, cf. 2.4.3). For instance, Súper Justo – a zero-waste shop from Viña del Mar – allows its customers to reuse their own plastic bags. While this may raise hygiene-related concerns, the CEOs of Súper Justo noted that they promote commerce based on trust between sellers and buyers at the neighborhood level. Another solution concerns sales of detergents in bulk at refillable stations in large supermarkets, as intended by Freemet. However, the fact that Freemet collects liquid containers washed in cities far away from Santiago implies rebound effects associated with high carbon footprint resulting from the shipping procedure. Hence, collecting and washing those containers locally could increase the efficiency of Freemet's operations.

In terms of furniture, it is unlikely that TECHO Chile furnishes its houses with second-hand furniture because it is widely acknowledged that any donations, outside those of an emergency nature, should be monetary. To offset this potentially negative environmental rebound effect, TECHO instead offers community workshops on how to construct furniture. It also has the possibility of selling furniture produced by the Fundación Vivienda from timber residues from construction sites. However, using and upcycling second-hand furniture should be more economically viable.

With regards to the textile sector, the vast majority of clothes in second-hand shops is manufactured in Asia, and SEs, too, may import textiles from abroad. For instance, while Miss Moon Reutilizables imports new waterproof fabrics for reusable sanitary pads from the US, the second-hand textiles acquired from the US by Uniformes Reciclados had been earlier imported

from Asian countries. Unsold clothes may be then either sold to rag merchants who pass them on to third countries or incinerated in landfills. For example, tons of unsold clothes that arrive in Chile from all around the world end up in rubbish dumps in the Atacama Desert, where they are being burnt, further causing pollution (Bartlett, 2024). Whilst SEs such as Ecocitex slow down loops by delaying the journey of the end products to a landfill, it is important to account for pollution-/toxicity-related rebound effects associated with such disposal sites. This concerns not only textile waste but also plastic waste.

3.3. Greenwashing as an element of circular rebound effects

In line with Lyakhov and Gliedt (2017), research findings reveal that partnerships or collaborations between SEs and private sector organizations are characterized by variegated forms of control, levels, frequency, intensity and longevity of interactions, and degrees of formality. Scrutinizing circuits of value shows that while some SEs tend to focus more on accepting/seeking donations of resources from private companies, others place more emphasis on (in)formal business-to-business (B2B) transactions. Such collaborations across profit and non-profit boundaries can foster the creation of a more (synergistic) value together than they could have done separately (Porter & Kramer, 2011; Austin & Seitanidi, 2012). They do, however, raise ethical concerns with regards to private companies using links to circular SEs in order to indulge in window dressing/greenwashing – processes denoting rebound effects (Kopnina, 2019).

Window dressing refers to a strategy whereby a company attempts to make its corporate image more environmentally and socially friendly by using mutual funds to boost its CSR and the firm's reputation in the face of many reputational pressures and the need to achieve competitive advantage in the market (O'Neal, 2001; Lin, 2001). For instance, by transforming "waste" from private companies, i.e. residues from the primary production cycle, into upcycled goods (e.g. bins from upcycled wooden pallets), SEs enable private companies to align their CSR with SEs' social and environmental mission whilst lowering their waste management fees. Those savings may be then used by private companies to further invest in unsustainable production and consumption practices. Regardless of case-specific challenges associated with social-private partnerships, the CEO of an SE recycling unsold clothes from large retailers interestingly highlighted the importance of working with the "bad guys" [large private companies]:

If you work with the "good guys", the impact is not so great in the long run, because the "good guys" are not generating a bad impact. If you get the "bad guys" to do a good thing, then you are actually helping to decrease the bad impact they are generating. I'm not ashamed of working with the "bad guys"; when you work with the "bad guys", you can have the biggest and greatest impact, because their impact is one of the most negative in the world (Interview, March 2020).

In a similar fashion, the CEO of an SE upcycling wooden pallets stated that he was not afraid of working with big brands or being co-opted by large private companies, as they, in fact, need SEs:

They [private companies] need us. They are like sharks that do not eat little fish [us] – they need clean-up. And then the shark is in control. Sharks' poo is circular economy: it is food for little fish, it feeds little fish (Interview, March 2020).

SEs thus have an untapped potential to assist private companies in taking responsibility for their products at the end of their life. While each party draws benefits from this transaction accordingly to its motives (e.g. corporate partners may increase public awareness on socio-environmental issues being tackled by SEs), B2B transactions and similar agreements may contribute to rebound effects by indirectly perpetuating deeper structural problems underlying contemporary economic systems. For example, it is important that companies prioritize waste prevention above reuse, recycling, (energy) recovery, and ultimately landfilling in order to significantly minimize their negative environmental externalities (Hultman & Corvellec, 2012). While private partners (including waste management companies) may already be adopting some internal waste prevention strategies at the company level by sending out-of-use or surplus materials to SEs (e.g. wooden pallets, unsold clothes), they do not prevent waste generation and overexploitation of natural resources. As it was mentioned in Section 3.2 on environmental ethics, circular products are also likely to be landfilled or incinerated at some point during their lifetime, implying the need to account for any potential rebound effects associated with landfills.

Moreover, private companies may acknowledge social and environmental benefits of such collaborations, but this does not make them more likely to profoundly reconsider their links to global commodity/value chains and exploitative labor relations (Phillips & Sakamoto, 2012). Corporations may intend to appeal to more investors by boosting their image through working with SEs. By enabling SEs to repurpose their waste, they indirectly make a profit, which may prompt them to procure new goods from the primary production cycles/upper circuits, thus causing a rebound effect. Claims can be made that the localized nature of such transactions perpetuates patterns of uneven development resulting from locally entrenched economic practices.

It is also worth mentioning the social responsibility aspect of activities in the Fourth Sector. SEs provide not only inclusive work schemes for excluded and disadvantaged individuals but also services to give assistance to the neediest. For example, Freemet reaches deprived communities by occasionally donating their products (e.g. laundry detergents via TECHO Chile). Other SEs such as Miss Moon Reutilizables, Biorigen, or Emporio Natural intend to organize hygiene workshops in deprived communities. While they may likewise indirectly contribute to environmental challenges previously indicated, they do, in fact, simultaneously contribute to welfare-enhancing rebound effects.

3.4. Links between circular rebounds and gender

Contrary to the work on circular alternative economic spaces by Schor et al. (2016), the research findings do not reveal any significant gender inequality/imbalance among SEs. Some sectors in CE do, however, tend to be dominated by men (wood sector), and some other by women (textile and hygiene sector). This suggests that one gender is likely to contribute to higher/lower rebound effects in particular sectors in terms of lower/higher resource savings as compared to the opposite gender. Nonetheless, resource savings may imply cost savings that can be used to purchase goods and services, decreasing the former. Specifically concerning women, many of the studied circular SEs are co-founded and/or run by women, and some of them specifically address their activities to women. This is very interesting given that in countries such as Chile, “*machismo*” is still deeply ingrained in the society despite recent efforts to challenge it through state programs such as CORFO de Mujeres. Examples of initiatives geared towards women include production of DIY zero-waste soaps/shampoos, toothpaste, and detergents (e.g. Emporio Natural, Biorigen, Freemet), reusable sanitary pads (e.g. Miss Moon Reutilizables), recycling of textiles (e.g. Ecocitex – an SE offering female ex-offenders access to technical roles that have been historically reserved for men). While Tedoy – an SE running Facebook groups (“Tedoy Grupos”) enabling users to share goods they no longer want free of charge – was co-founded by male entrepreneurs, Tedoy Grupos are predominantly managed and actively used by females. Moreover, the fact that Emporio Natural provides educational and female-oriented workshops on how to make zero-waste toiletries is consistent with Howell’s (2020) notion that “women have higher levels of socialization to care about others and be socially responsible, which then leads them to care about environmental problems and be willing to adopt environmental behaviour” (Howell, as cited in Hunt, 2020). Future research could thus focus on a more in-depth exploration of the ethical imperatives associated with rebound effects linked to production and consumption patterns between men and women in particular socio-geographical settings. For example, women are more likely to buy second-hand clothes on a regular basis, and the savings accrued through these practices may only drive further consumption, causing a “re-spending effect” (Singh, 2024). It is very important to account for such aspects, given that the role of women in navigating the transition towards CE remains underrepresented in the current CE discourse, which should embrace the participation of men and female alike (Rizos et al., 2017; Schröder, 2020; Korhonen et al., 2018).

4. Conclusions

Using the lens of local-to-global *circuits of value* (Lee et al., 2004), the present study makes an important contribution to the emergent discourse on multidimensional rebound effects in CE. Indeed, although there is a growing body of

research on rebound effects associated with CE practices, there are not many studies on ethical dimensions of circular rebound effects. This paper, therefore, brings into light ethical tensions underpinning the operational activities of Fourth Sector SEs (including material circulation), which are enabled through links with the private sector and which determine the organizational sustainability of both alternative and mainstream companies. The findings reveal that SEs form “lower circuits” of value that are to some extent subordinate to the “upper circuits” (i.e. those dominated by mainstream economic activities and organizations, e.g. multinational firms) through social relations of power and authority in the wider economy (Santos, 1977). Such power dynamics are shaping social relations and transactions conducive to integrative CE, wherein circular SEs often use second-hand or surplus materials from private companies as production inputs. Since such materials circulate through global production networks, they may be associated with complex and exploitative (of labor and the environment) social and material conditions. Such SEs may thus trigger rebound effects by indirectly perpetuating a range of socio-environmental problems.

Given that SEs enable private companies to align their CSR with the SEs’ social and environmental mission whilst lowering their waste management fees, it is important to consider potential risks of rebound effects in terms of greenwashing. For example, corporations intend to appeal to more investors by boosting their image through B2B partnerships. In allowing SEs to repurpose their waste, they (in)directly make profits, which may prompt them to procure new goods from the primary production cycles/upper circuits. Hence, SEs do not have the capacity to propel large international corporations to substantially rethink their practices. To some extent, they do, in fact, address, and somewhat internalize, mainstream enterprises’ rebound effects – i.e. significant amounts of waste being created (e.g. when it comes to unsold textiles in mainstream stores). There are, however, other SEs (e.g. Prana Sopas, Biorigen, Freemet, Súper Justo, Emporio Natural) which do not necessarily make use of “mainstream waste”, instead offering zero-waste or biodegradable products (e.g. shampoo bars, detergents/food in reusable packaging). Those enterprises have an important part to play as role models for unsustainable large businesses, creating new trends. Since there will always be a demand for cheap products in society, those alternative business models should be sustainably mainstreamed so that prices of zero-waste goods decrease, making them more accessible to lower income groups. More efforts are, however, also needed to address the problem of overconsumption, which underlies mainstream economic logic and will not be solved by SEs alone. In fact, savings from purchasing low-income goods (usually from secondary production cycles) may propel consumers to spend those savings on more (potentially resource-intensive and/or useless) products. Overall, in uncovering some of the ethical and, in fact, intrinsically social elements of circular rebound effects, this study showed that they are symptomatic of wicked problems that need to be jointly tackled and taken into account by practitioners, entrepreneurs, citizens, urban

planners, and policymakers in the early planning phases across different spatial scales, if a transition towards truly socially integrative (that is, just) CE is supposed to occur. Such joint efforts to address rebound effects do, however, require complex mediation between conflicting, place-specific interests and policy priorities across different stakeholders and territories – and all this amid complex external market-driven forces (cf. Deutz et al., 2024).

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ABSTRACT

Ethical dimension of rebound effects in integrative circular transition: insights from the Fourth Sector in Chile

This article uncovers ethical tensions underpinning rebound effects surrounding thirteen Chilean case study social enterprises and their networks. Representative of the Fourth Sector of the economy and engaged in circular economy practices, those social enterprises are demonstrated as entangled in a complex web of social, spatio-temporal, material, and local-to-global circuits of value. Since all those aspects carry significant ethical implications, they need to be considered by policymakers, entrepreneurs, and practitioners interested in a transition to a socially integrative circularity in various institutional and geographic contexts.

Keywords: circular economy, rebound effects, the Fourth Sector, ethics, circuits of value

STRENGTHENING TOURISM AS AN ELEMENT OF SUSTAINABLE DEVELOPMENT OF PERIPHERAL AREAS OF EASTERN POLAND. THE EXAMPLE OF THE MUNICIPALITY OF JANÓW LUBELSKI

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1. Introduction

The purpose of the study is to assess the degree of development and ways to strengthen tourism in the peripheral regions of Eastern Poland, using the example of the municipality of Janów Lubelski. Poland's eastern regions are characterised by the lowest degree of environmental transformation and above-average natural and cultural environmental values. Their high natural, landscape, architectural, and cultural values do not always go hand in hand with developed tourist infrastructure. The lodgings, food services, and accompanying facilities are also reportedly of rather low quality. However, there are areas where tourist resources are an important element of local development. One of them is the municipality of Janów Lubelski, which, based on the resources of the natural and cultural environment, has become a major tourist centre of the southwestern part of the Lublin region.

The study is based on a critical analysis of literature, statistical data, a review of regional and local strategic documents, an analysis of cartographic materials, data from the municipal office in Janów, interviews with major tour operators in the municipality, and field observations.

2. Area and location

The municipality of Janów Lubelski is a medium-sized urban-rural municipality. Its total area is 178.7 km². It is located in the southern part of the Lubelskie Province and the Janów County, near the border with the Podkarpackie

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Province. The centre of the municipality is occupied by the town of the same name, covering a small area of 2.26 km². The municipality lies by the important S19 expressway (Via Carpatia) connecting border crossings with Lithuania and Slovakia via large cities of eastern Poland: Białystok, Lublin, Rzeszów. In addition, national road 74 runs through the city and municipality, starting at the border crossing with Ukraine in Zosin and leading through Zamość and Kielce to eventually merge with S8 expressway. In the near future, S74 expressway is planned to run through the municipality. However, the location of Janów Lubelski is less favourable in terms of the railroad network. The nearest train stations are located several kilometres away from the borders of the municipality. This transportation network makes it a relatively accessible area, conducive to the development of tourism.

3. Natural attractiveness

The municipality is an interesting example of an area highly attractive to tourists mainly thanks to its natural environment. It lies in the zone where the belt of Central European uplands (Lublin Upland and Roztocze) meets the Pre-Carpathian Basin. The greater part of the municipality is located in the Sandomierska Basin forming part of the Biłgoraj Plain mesoregion – sloping gently toward the southwest of a vast plain (Pleistocene terraces) covered with sands, diversified with hills in the form of dunes. As a result of the very poor quality of the soils, exceptionally large areas of forest have been preserved here. The forest cover percentage of Janów municipality is one of the highest in the province (66.2% for the rural-urban municipality, 69.8% for the rural area). In this respect, it is second only to the municipalities of Zwierzyniec (70.8%) and Terespol (71.0%) in the Lublin Province, where the Roztoczański National Park is located. Most of the forests are located within the Janów Forests Landscape Park, created in 1984 on an area of 39,150 hectares (the buffer zone is 60,500 hectares). The park was created to protect the complex of Janów Forests, Lipskie Forests, and a fragment of Solska Forest, forming one of the largest forest areas in Poland. The dominant habitat types are fresh forest, wet forest, dry forest, and swamp. River valleys are overgrown with alder and swamp forests. The most valuable areas with rare and protected species of plants and animals have been placed under reserve protection. There are three nature reserves in the municipality: Janów Forests, Imielty Ług, Szklarnia, all made available for educational and tourist purposes. Another natural attraction are mid-forest ponds formed in deflation depressions, in the vicinity of dunes, mostly filled with rainwater. Many of them are a refuge for numerous bird species. This type of landscape is unique in Europe. The high rank of natural values has allowed for the creation of a bird sanctuary, officially named Lasy Janowskie PLB 060005, on almost the entire forest area of the municipality, and a habitat sanctuary called Uroczyska Lasów Janowskich PLH 060031 on the reserves and

in adjacent areas. In the 1990s, a proposal was put forward to create a national park here. The idea was not implemented, substituted by the establishment of the Janów Forests Promotional Forest Complex. Similar complexes have been created in Poland since the 1990s. They constitute habitat-diverse areas where sustainable forest management is promoted and where scientific research and education are encouraged. Currently, there are 25 such complexes in Poland.

4. Cultural attractiveness

The region of Janów Lubelski is an attractive area both in terms of material culture monuments, cultural landscape, and increasingly appreciated intangible values. Until the beginning of the twentieth century, the area of the municipality formed part of the Zamojski family entail, one of the few indivisible private estates excluded from the general provisions of the law and operating under the rules bestowed by the Sejm in the form of a special statute. From the seventeenth century, Janów Lubelski was the economic and administrative centre of the Zamojski entail, known for its large-scale and well-developed cloth production. The Zamoyski family's activity has left its mark in the form of numerous historic objects, mainly within the city: the Baroque Church of St. John the Baptist with an image of Our Lady of Grace, which is a copy of the painting from the Church of Santa Maria Maggiore in Rome, as well as the monastery buildings of the Dominican Order, the building of the former court and prison, the brewery dating to the early twentieth century, and the entire urban layout of the city. There is also a very interesting private museum of photography in Janów Lubelski. An architecturally interesting object is the wooden church in Momoty Górne. It is worth mentioning that the area around Janów Lubelski is famous for the largest number of wayside shrines and crosses in Poland. Among the biggest tourist attractions is the Potters' Homestead, which popularises the ancient pottery traditions of the region. There is also a school in Janów which teaches how to play the Biłgoraj *suka*, an ancient folk string instrument. One of the municipality's many cultural events is the Festiwal Kaszy – Groats Festival. It promotes products made from buckwheat, which is a crop traditionally grown in the region. The area around Janów cultivates old folk traditions and rituals: singing traditional folk songs, lining paths with sweet flag on Pentecost, baking *gryczaks* (savoury pies with buckwheat and curd cheese filling), and making traditional cranberry and honey tinctures.

5. Tourism development

The municipality's tourism infrastructure is assessed as outstanding compared to neighbouring municipalities. According to CSO reporting, in 2022 there were seven accommodation facilities here (out of a total of nine in the county)

with 402 beds, as compared to 589 in 2015 (Kałamucka et al., 2017). The largest number of year-round lodgings is provided by the DUO, Królewski, and Myśliwski hotels. The Almatour Recreation Centre, the “Karino” Equestrian Centre, the Emes Recreation Centre, and the Ecological Education Centre also offer accommodation.

All three hotels have their food service facilities. In addition, the catering base in Janów Lubelski comprises three restaurants, five pizzerias, and nine bars, as well as three catering establishments outside the city: in Łążek Ordynacki, Łążek Garncarski, and Pikuły. The urban-rural character of the municipality means that the tourist base consists of facilities located mainly within the city. It is formed by a network of numerous stores, service facilities, including sports and recreational facilities such as the municipal stadium and the modern Otylia swimming pool opened in 2008. At the time, it was one of the few swimming centres across all of the Lublin Province’s county towns, which is why it increased Janów’s attractiveness compared to other towns in the southern part of the province.

The oldest element of the municipality’s tourist infrastructure are the hiking trails that allow for the development of cross-country tourism. Their creation is intrinsically linked to Poland’s history – they were delineated by the former state authorities to promote the historical values of the region – mainly the partisan fights which took place there during World War II. The focal node in the network of trails is Porytowe Wzgórze – the site of the largest partisan battle in Poland, fought on 14 June 1944. This is where the routes of all hiking trails in the municipality converge. In addition to hiking trails in the Szklarnia and Imielty Ług reserves, two educational paths with a total length of 3.5 km and a walking path around the Forest Education Centre were marked out in 1995–2000. Bicycle tourism is also encouraged, facilitated by the designation of three bicycle paths and three sections of connecting trails, allowing access from Janów to Green Velo – the longest cycling trail in Poland, running south of the Janów Lubelski municipality. Thanks to numerous cycling events organised in Janów Lubelski, it can be considered the second most vibrant cycling centre of southern Lublin region after Józefów. Cyclists are easily drawn to the area due to the attractiveness of its forested landscape with small slopes varied with dune hills. The trails mentioned above are: Expedition to the Forest Treasure, leading through sites with the greatest natural, cultural, and ethnographic values in the municipality; Trail of Clay Pots (bicycle trail, green signs); and the Black Pearl Trail – a section of a longer trail called Five Lagoons – Sea of Attractions, aimed at promoting the integration of the attractions of the Janów Lubelski municipality and the Western Roztocze region (Kałamucki et al., 2016). The development of active tourism is also fostered by two mobile off-road bicycle routes and go-kart rental spots. A unique attraction that does not exist in other parts of the region is the possibility of taking a trip on *pendzoks*. These are four-person bicycles powered by their riders’ legs, designed to be ridden comfortably even on uneven terrain.

The Swamp Brotherhood [Bagienne Bractwo] offers a tourist product consisting of an expedition combining *pendzok* riding, canoeing, and hiking with Nordic walking poles. A horse trail called Cwał (43 km) has also been established in the forest areas, taking off from the edge of the forest at the Karino Centre.

6. Volume of tourist traffic

The study has showed that there is a concentration of important elements of tourism infrastructure, conducive to the development of tourism, on the border of forested areas, near the ponds. These include the Wibit water park, two guarded bathing beaches, a new marina with a pier, and storage facilities for boating equipment. In the part adjacent to the ponds, there is the modern, 10-hectare Zoom Natury Recreation Park (designed by the creators of the Warsaw Uprising Museum), the design of which received a prestigious award for the Best Leisure Architecture in Europe. In addition to educational facilities (four so-called Knowledge Laboratories: Forest Fleece, Avifauna, Troposphere, and Energy and Recycling), there is an active recreation section: Rope Park, Escape Room, Energy Square, and Tower of Power.

According to data from MOSiR, the Rope Park was visited by 30,917 people in 2016 (with the highest number of visitors in June – 7,165) and the Laboratories by 15,174 people, of which 11,033 came in organised groups. In 2023, the number of visitors was lower. The Rope Park was visited by 16,655 people, and the Laboratories by 8,223 people. The reason may be the expanding number of similar attractions operating around Roztocze, including the area covered by the “Archipelago Roztocze” project, a framework which has led to the opening of new educational and recreational facilities, such as Family Park or Ironland.

The municipality’s potential for water tourism lies in the Bukowa River, which has a natural winding course and a sandy bottom, as well as a long section flowing through scenic forest areas. Rafting on the Bukowa River is possible on four sections. The rafting routes feature elements of small tourist architecture: canopies, places for bonfires, swings. Rafting trips in the municipality are organised by private companies: Swamp Brotherhood and MakAdan. The Lublin-based Kajaki Lublin company also offers similar tours.

A wide range of tourist services related to the use of forest resources is provided by the aforementioned Swamp Brotherhood of Field Observers, addressed to both organised groups and individual tourists. The Brotherhood organises, among other things, canoeing trips, off-road vehicle expeditions, mushroom picking, nature observation, bicycle expeditions, and winter sleigh rides. Its activities also support the publication of cartographic materials covering the Janów Forests area. The company caters to several thousand tourists annually.

The Janów Lubelski Forest District and the Forest Education Centre provide valuable active tourism attractions combined with forest education for children and youths. Classes are held on the premises of the Centre and in its surroundings. According to a report from the Forest Division, 5,164 people, including 44 foreigners, stayed in the Education Centre overnight in 2016. The nature exhibit, which is open to the public, is visited annually by about 20,000 people. The 118 classes conducted in 2016 were attended by 3,930 people, of which 189 were preschool children who visited the nature exhibition and later took part in outdoor activities. The largest group participating in the classes were school-age children – 3,111 people (including 2,035 elementary school students). About 60% of the classes were held outdoors. Since the beginning of the war in Ukraine, the centre has served and continues to partially serve as a refugee centre. In 2023, 3,836 people were given overnight stays there. The total number of stays (per night) was 11,365, of which 8,636 were by Ukrainians. As of 2024, the arboretum located at the seat of the Forest Division was given the status of a botanical garden, which significantly raises its importance and is expected to generate increased tourist traffic in the future.

According to Tucki (2009), who evaluated the tourism potential of the Lubelskie Province, Janów Lubelski ranked as the most attractive municipality in the administrative unit. The score was assessed with the use of the synthetic measure of tourist attractiveness (SMAT), taking into account tourist resources, tourist and paratourist infrastructure, and communication accessibility. Janów Lubelski also ranked first in terms of the functional indicator of tourism development, which includes the active involvement of the authorities in encouraging its growth. The development of the tourism function can be gauged with the commonly used Barteje-Defert indicator (number of beds in lodging facilities per 100 inhabitants), the indicator of the density of accommodation facilities per square kilometre, as well as the share of employees working in tourism-related sectors of the economy. These indices for the municipality of Janów Lubelski are significantly higher than for the Lubelskie Province or for entire Poland, although in the latter case the difference is smaller. In 2015, the Barteje-Defert index was 3.66 for the municipality of Janów Lubelski, 1.02 for the Lubelskie Province, and 1.85 for Poland. In 2022, these values were, respectively, 2.27, 1.26, and 2.07. In terms of accommodation density, in 2015 the municipality scored 3.29, the Lubelskie Province – 0.87, and Poland – 2.27. In 2022, the same index was calculated at, respectively, 2.25, 1.01, and 2.49. This distribution of values reflects the indicator's high sensitivity to small changes in the number of beds for smaller administrative units. An analysis of the number of tourism-related entities shows an upward trend. In 2015, the municipality boasted 19 such establishments, with their number steadily increasing to reach 23 in 2022. The municipality benefitted from the spatial development plan adopted in the area, which prevented the chaotic spread of tourist and recreational facilities.

7. Assessment of the use of tourist assets

Several factors determine the degree to which the municipality puts natural assets to use for the purposes of tourism. Among the more important are: the quality of the natural attractions, the condition of tourist infrastructure (hiking trails, accommodation, catering, social facilities), but also weather conditions that determine the intensity of tourist traffic (Tomik, 2015; Wyrzykowski, 2010; Merski & Warecka, 2009; Toczek-Werner, 2005).

The detailed studies conducted show that the quality of the municipality's natural assets is very high, as evidenced by the numerous forms of nature protection (Tucki, 2010). Similarly, the value of the region's cultural heritage lies in its uniqueness and authenticity. The density of bicycle and hiking trails, the number of year-round and seasonal accommodation facilities, much higher than the average in other municipalities of the Lubelskie Province, favour the development of tourism. An untapped potential is the existing network of bicycle trails as well as paved forest roads which perform similar functions. Likewise, water resources in the form of ponds, despite their recreational value – also linked to high visual attractiveness (the border of forest and water) – are hardly used for the purposes of active tourism due to their exploitation for animal husbandry and the private ownership of many parcels. The municipality of Janów Lubelski displays a clear spatial disparity in tourist use. When the weather is good and tourists and recreationists flock to places located on the edge of the forest areas outside the city, such as the beaches or the rope park, it becomes clear that overcrowding lowers the comfort of recreation, a phenomenon which does not occur in the central and southern parts of the forest areas.

8. The tourist function of the municipality in strategic documents

The importance of tourism for sustainable development is recognised at both regional and local level. The municipality appreciates the potential of the valuable natural protected areas occupying 73% of its area for building a future tourist base according to the principles of sustainable development. One of the priority objectives in the Local Development Strategy for the Janów Lubelski Municipality for the period 2008–2013 was the development of tourism based on the above-average values of the natural and cultural environment, which was aimed at improving the quality of life of the inhabitants and the economic activation of the region. As much as 39% of all funds invested by the municipality were allocated to infrastructure related to culture, sports, and recreation, alongside 33% spent on environmental protection and 20% on technical infrastructure related to revitalisation projects for the town and rural localities. The same timeframe also saw the implementation of an initiative uniting Janów with five other municipalities from the Roztocze region to

create a joint information and promotion system for serving tourists in their area. More than 40% of the funds raised by entrepreneurs were invested in the development of accommodation and catering facilities. The goals for the development of the municipality contained in the new Local Development Strategy for the Municipality of Janów Lubelski for 2014–2022 (EuroCompass Sp. z o.o., 2014) included continuing to expand the local tourism base and improving environmental infrastructure. In this context, it is important to point out that Janów Lubelski is planning to become a spa, this being one of the courses of action for meeting the municipality's new strategic operational objectives, namely strengthening its tourism potential on a regional and national scale. This goal aligns with a broader flagship project contained in the Development Strategy for the Lubelskie Province until 2030 (Departament Strategii i Rozwoju UMWL, 2021), which will seek to obtain spa or health resort status for a number of areas with natural healing properties (mineral waters, climate) in municipalities located on the southwestern fringes of Roztocze; these, apart from Janów Lubelski, include Biszczka, Łukowa, and Susiec. If successful, the Janów Lubelski municipality would join the ranks of health resorts boasting tertiary sulphuric water sources and would gain the status of a tourism area of national importance.

9. Summary

The municipality of Janów Lubelski has high tourist qualities. However, according to local tour operators, it lacks at least 300 accommodation facilities, campgrounds, and campsites. Few services cater to families with children or to seniors. The municipality's local government shows a very strong commitment to developing tourism in cooperation with individuals and local organisations interested in fostering active tourism (Zefir Sailing Club, Bicycle Tourism Club). The municipalities forming part of the Janów County form the "Forest Circle" Action Group promoting the attractions of the Janów Forests. However, due to its peripheral administrative location (near the border with the Podkarpackie Province) and the local name of the forest areas (Janów Forests), cooperation with the neighbouring counties of Biłgoraj, Tarnobrzeg, Nisko, and Stalowa Wola is limited.

The municipality has a large natural potential for tourism development (66% of its area is covered by forests, 73% by protected areas). This has been indicated as the desired direction for growth in strategic documents; by focusing on taking advantage of the existing environmental resources, it falls in line with the principles of sustainable development. The municipality also has a favourable location in terms of its relative proximity to large urban centres, and it invests significant funds in the development of tourist infrastructure that promotes active forms of recreation. Investments in accommodation facilities may increase the attractiveness of the municipality among tourists.

On the other hand, Janów's advantageous location remains underused, with few tourism products taking advantage of a potential cooperation with neighbouring tourist areas of the Lublin and Sandomierz regions. The tourism development indicators have showed a slight downward trend in recent years, which may reflect the emergence of competing tourist facilities and should prompt the local authorities and tourist companies to make efforts to improve the attractiveness and quality of services. The situation may be improved if the provincial authorities succeed in their plans to create a health resort in Janów Lubelski.

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ABSTRACT

Strengthening tourism as an element of sustainable development of peripheral areas of eastern Poland. The example of the municipality of Janów Lubelski

The purpose of the study was to assess the degree of development and ways to strengthen tourism in the peripheral regions of eastern Poland, using the example of the municipality of Janów Lubelski. This part of Poland is characterised by the lowest degree

of environmental transformation and above-average natural values. Making use of this potential can be an important component of the region's development. The discussed example of the Janów Lubelski municipality indicates great opportunities for tourism development in this area. The strengths of the municipality are its favourable geographic location, high natural and landscape values, developed tourist infrastructure, and authenticity of folk culture. Weaknesses include a relatively low level of accommodation, lack of integrated tourism products, and excessive concentration of tourist traffic south of the city.

Keywords: tourism, sustainable development, peripheral areas, eastern Poland, Janów Lubelski

BIO-COMMERCE IN LATIN AMERICA

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1. Introductory remarks

Since the beginnings of human life on Earth, we have been witnessing over-use or overexploitation of natural resources, which has brought the biological extinction or transformation of many species. In recent times, however, this exploitation has grown to such a point that it causes concern for the global environment.

For example, the mass-scale conversion of tropical rainforests into arable land and grazing fields has generated climate changes manifesting in high temperature amplitudes, a drier atmosphere, primarily superficial hillside erosion under rainfall, and change of regional precipitation patterns. The phenomenon affects the climate of the entire planet.

Multiple human-specific factors affect the environment of Earth, among them the felling of the tropical jungle, the use of fossil fuels, the degradation of coastal systems, the accumulation of contaminants in estuary systems, the erosion of farming soils, the loss of germplasm in traditional crops, the reliance on monocultures, the inadequate exploitation of species and their biological extinction. For this reason, it is necessary not only to spread environmental awareness among all human beings but also to put effort and take action to halt the accelerated deterioration of the environment and recuperate its biodiversity.

Biological diversity finds its expression in a tally of what there is and what is being lost, a symbol of millions-of-years-long biological evolution at risk of undergoing an irreversible change. Latin America is a particularly diverse

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region of the planet. The biodiversity found there is truly outstanding and carries particular strategic importance, since it offers many opportunities not only for the environment but also for society and its economy. The region undoubtedly carries immense productive potential for the primary sector, which makes bio-commerce an excellent alternative path of development for this area, extending from the tropics to the subantarctic zone, boasting both a seashore and mountain chains covered with glaciers reaching the altitude of about 7,000 meters. Vegetation types in Latin America span from the species-rich tropical rainforests to the arid, almost completely barren deserts, and from the unique coastal flora with mangroves and coral reefs to pioneer plants high in the mountains (Borsdorf, 2008; Guttman et al., 2004; Medina Patiño, 2008).

Latin America, therefore, is one of the most important biodiversity reserves. For this reason, it quickly becomes clear that it should be considered a fundamental part of natural heritage – a heritage shaped as much by ecosystems as by the traditions and cultural customs of local towns and regions (Perera-Sánchez, 2007).

This is where bio-commerce comes into play. Its philosophy lies in seeking to reasonably take advantage of the benefits of biodiversity, ensuring sustainable management of resources through the implementation of practices aimed at resource conservation and sustainable use. These principles and criteria are embodied in programs adopted at the international, regional, and local level, and should be followed by all companies and communities that produce and trade goods as part of bio-commerce. An important treaty in this respect is the Convention on Biological Diversity (CBD), which holds as its main goals the conservation of biological diversity, sustainable use of its components, and equitable and just distribution of the benefits derived from using genetic resources (Ramos, 2001; Secretaría del Convenio sobre la Diversidad Biológica, 2002).

2. Sustainable bio-commerce

Bio-commerce or bio-trade is a term coined during the third Conference of the Parties to the Convention on Biological Diversity (COP 3) held in Argentina in 1996 and formally adopted by CAN, UNCTAD, and CAF in 2004. It is defined as the ensemble of activities such as harvesting, production, processing, and trading of goods and services deriving from native biodiversity under the criteria of environmental, social, and economical sustainability.

UNCTAD has undertaken its BioTrade Initiative (BI) with the objective of stimulating commerce and investments in biological resources and propelling sustainable development in line with the objectives of the CBD. The basic principles behind the initiative are exactly the same as those earlier agreed on by the UN, that is the conservation of biological diversity, sustainable use of its components, ensuring just and equal participation in the benefits derived from

the use of biological and genetic resources, and provision of socio-economic support. Productive, financially viable, and marketable processes should be implemented under appropriate national and international legislation. These regulations should respect the rights of the actors involved in bio-commerce and clearly define the ownership of land, the scope of use and access to natural resources, and the knowledge necessary to exploit them (Gómez, 2008; Proexport Colombia, n.d.).

For this purpose, UNCTAD has established a strategy of expanding the initiative with special emphasis put on countries of particularly extensive and valuable biodiversity. BI runs programs in Africa and Latin America. In case of the latter, activities have already been launched in Colombia and Brazil, while in Peru, Bolivia, Ecuador, and Venezuela, they are currently in the design stage (Rivera et al., 2000; Granada et al., 2006).

Bio-commerce differs from traditional trade in that it does not have exclusively utilitarian focus but is rather interested in promoting local populations' human and economic development on the basis of resources drawn from biological diversity. It does not exploit endangered species and seeks to obtain the consent of Indigenous and local communities and involve them in the locally taken initiatives. The activities engaged in as part of bio-commerce should be guided by the principles set out in the CBD. Bio-trade is an undertaking involving a great deal of actors from the private and public sector as well as the civil society (Leyva-Cervantes, 2008; Moreno & Rivera, 2007).

Although bio-commerce is a unique and valuable approach thanks to its focus on the conservation and sustainable use of biodiversity and the generation of social benefits, it is also a growing sector of the economy. As such, it has started to experience difficulties in terms of financing its projects. This is because it relies on small and rural companies with their specific set of challenges: low real security value, limited credit experience, short lifespan, low managing capacity, as well as factors such as the culture of non-refundable financial support or lack of awareness of good credit practices.

Inspired by the BioTrade Initiative described above, an impact assessment system of bio-commerce has been devised based on the principles of sustainable development. Based on an analysis of the changes which bio-commerce has introduced into the lives of a given local community and the environment, the system helps evaluate whether the sum of these activities and initiatives has had a positive or negative impact on the area, whether intentionally or not (Suarez Olave, 2003).

Continuing in this path, the report titled *Biocomercio: una alternativa para el desarrollo sostenible* [Bio-commerce: An Alternative for Sustainable Development] (Murillo & Arias Ramírez, 2008) emphasizes that it is indispensable for both local communities and governments and institutions to be made aware of and sensitized to the issue of the preservation of the natural resources used for the production of goods and services that may foster the well-being and economic growth of local communities. It is necessary to prioritize

protecting the environment and to exploit resources in a sustainable fashion, promoting responsible consumption and taking active steps to preserve biodiversity. Concomitantly, as the demand for environment-friendly, organic, and health-beneficial products grows, governments should open spaces for the foundation of new companies and create conditions for increased differentiation and incentivization of the production and trading of goods and services derived from sustainable use of biodiversity (García, 2009).

Entities involved in bio-commerce comprise natural or legal persons interested in producing or trading biodiversity-based goods or similar products in line with good economic, environmental, and social management practices. The principal tool for identifying such products is based on a hierarchic scale of principles and criteria, which are (UN, 2007):

Principle 1. Conservation of biodiversity

This principle states that companies should contribute to the maintenance of biological diversity in all of its aspects (genes, species, and ecosystems).

- Criterion 1.1: Maintenance of the characteristics of ecosystems and natural habitats of the advantageous species.
- Criterion 1.2: Maintenance of genetic variability of flora, fauna, and micro-organisms (for use and conservation).
- Criterion 1.3: Maintenance of ecological processes.
- Criterion 1.4: Framing activities in management plans, whether they take place in protected areas or not, in coordination with competent authorities and actors involved.

Principle 2. Sustainable use of biodiversity

This principle concerns the implementation of the CBD. It states that the products of bio-commerce are obtained under a system that is sustainable for the used resource and the ecosystem involved. The objective is exploiting a species or an ecosystem in such a way that its use does not exceed its capacity for regeneration and/or productivity. Companies should set up instruments for implementing good management and monitoring practices that will guide, shape, and improve the processes of production.

- Criterion 2.1: The use of biodiversity must be based on a document setting out a sustainable procedure, which includes elements such as a safeguard from the rate of exploitation exceeding the rate of regeneration, systems for monitoring population status, and performance indices.
- Criterion 2.2: The use of agrobiodiversity should comprise agricultural practices that contribute to the conservation of biodiversity.
- Criterion 2.3: Technical standards for the development of initiatives in ecosystem services should be met.
- Criterion 2.4: Information and documentation of the company's experiences should be gathered and generated to contribute to our knowledge of biodiversity.

Principle 3. Just and equal distribution of benefits derived from the use of biodiversity

This principle corresponds to the third objective of the CBD, as well as its other provisions concerning the equal distribution of benefits. This refers to the access and distribution of the benefits drawn from the use of genetic resources, which should be exploited under previous informed consent and on terms mutually established by the relevant parties.

- Criterion 3.1: Interaction and inclusion of possibly the highest number of actors in the value chain into bio-commercial activities.
- Criterion 3.2: Value must be generated along the entire chain in a transparent procedure, thereby allowing all the actors to position their goods in the markets as value added products.
- Criterion 3.3: Gathering information and expanding knowledge of the markets.

Principle 4. Socio-economic sustainability (in terms of management, finances, and marketing)

Competition in the sphere of bio-commerce should result in the ability to position the products obtained sustainably in specific markets and keep them there for a time sufficient to generate the expected benefits.

- Criterion 4.1: Existence of potential in markets.
- Criterion 4.2: Financial profitability.
- Criterion 4.3: Generation of employment and improving quality of life.
- Criterion 4.4: Preventing potential negative impacts on the local productive and cultural practices which may, for example, affect alimentary diversity and food security.
- Criterion 4.5: Organizational and management capacity.

Principle 6. Respect for the rights of the actors involved in the bio-commerce

The generation of social capital is one of the pillars of sustainable development. For this reason, two fundamental aspects in running business in bio-commerce are to respect the rights of all actors that in one way or another interact with the enterprise and generate local development.

- Criterion 6.1: Respect for human, generational, and gender rights.
- Criterion 6.2: Respect for intellectual property rights.
- Criterion 6.3: Respect for the rights of the local community and Indigenous towns (territory, culture, knowledge, practices).
- Criterion 6.4: Maintenance and protection of traditional knowledge and practices.
- Criterion 6.5: Job security and adequate working conditions.

Principle 7. Clarity over land ownership as well as the use and access to natural resources and knowledge

Having certainty as to one's rights is fundamental for the responsible management of an enterprise. Only this way is it possible to make long-term investments and manage the company in a sustainable way. At the same time,

this awareness makes it possible to establish the responsibilities of each actor in the management of species.

- Criterion 7.1: Land ownership in agreement with binding regulations.
- Criterion 7.2: Accessing biological and genetic resources for their sustainable use under previous informed consent and respecting mutually agreed conditions.
- Criterion 7.3: Accessing traditional knowledge under previous informed consent.

The above principles are based on the objectives of the Convention on Biological Diversity (CBD): conservation of biological diversity, sustainable use of its components, and just and equal distribution of the benefits derived from the use of genetic resources. As for the second of the objectives listed here, namely “sustainable use”, Article 2 defines it as “the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations” (Secretariat of the Convention on Biological Diversity, 2011, p. 5; Rivera-Cruz, 2008).

The notion of sustainable use is also referenced in Article 10 of the CBD in consonance with Article 6. These provisions postulate that the sides of the Convention adopt regulatory measures for exploiting biological resources in order to prevent or minimize the adverse effects bio-commerce may have for biological diversity.

Article 6 of the CBD sets out general measures for the conservation and sustainable use of resources. Each party to the Convention, taking into account its individual conditions and capabilities, should:

- develop strategies, plans, or national programs for the conservation and sustainable use of biological diversity or, if applicable, adapt for this purpose the existing strategies, plans, or programs. These should reflect, among others, the measures established in the Convention relevant to the party concerned; and
- as far as possible and in accordance with adopted procedures, integrate the conservation and sustainable use of biological diversity into sectoral or cross-sectoral plans, programs, and policies.

Article 10 of the CBD concerns the sustainable use of components of biological diversity. Each party to the Convention, taking into account its individual conditions and capabilities, should:

- integrate measures for the conservation and sustainable use of biological resources into national decision-making processes;
- adopt measures regulating the use of biological resources to avoid or minimize adverse effects on biological diversity;
- protect and encourage customary use of biological resources in line with traditional cultural practices insofar that they are compatible with conservation or sustainable use requirements;

- support local populations in setting out and implementing corrective measures in the degraded zones where biological diversity has been reduced; and
- promote cooperation between governmental authorities and private sector in developing methods for sustainable use of biological resources.

In line with the above, the 1992 Earth Summit held in Rio de Janeiro resulted in devising a strategy for sustainable development which emphasized that sustainable use not only was necessary to maintain the variability and diversity of life on Earth and its biological diversity, but it could also serve as an efficient instrument for fighting poverty, achieving sustainable development, and promoting conservation (Londoño-Silva, 2008).

3. SWOT analysis of the indicators of bio-commerce in Latin America

Strengths

- They set out criteria and principles for designing further indicators.
- Their design is based on coordination between the actors (responsibility, management, community matters).
- They help spread understanding of the issue among the people involved.
- They are adaptable to changing circumstances or strategies.
- They are designed with variable parameters that can be expressed in figures, reflecting the current balance or imbalance.
- Their design takes governing regularity into account.
- They offer flexibility in the selection of pertinent criteria according to specific issues.
- They define the objective model and make possible its dependable operability and interpretation.
- They offer a reasonable approach to the concepts of sustainable development and well-being.
- They constitute an important step for developing instruments that aid in political decision-making.
- They emphasize the importance of environmental impact.

Opportunities

- Growing interest on the part of the private sector.
- Adoption of fixed standards by regulatory bodies.
- Spreading general awareness of communities.
- Promoting traditional knowledge related to good practices in managing natural resources.
- Fostering communities' awareness of how companies or production units may support their development.
- Promoting training programs.

- Access to knowledge about national and international regulations.
- Uplifting sociological research by combining it with fields such as ecology, regional economy, etc.

Weaknesses

- Unknown level of knowledge and uncertain availability or access to cutting-edge technology.
- Unexpected consolidation, synergy, or sectoral association of supply chains.
- Difficulties with defining appropriate methods of supporting the actors in the implementation process.
- Difficulties with identifying needs and resolving conflicts.
- Difficulties related to transparency.
- Uncertainty in terms of sufficient capacity for productive units' quality control.

Threats

- Difficult access to the community through information systems and processes.
- Limited availability of human talent and physical, financial, and technological resources to inform, support, and accompany processes and projects.
- Uncertainty in terms of which productive units deserve to be recognized.
- Possible dissolution of productive groups and chains.
- Negative impact of practices harmful to the environment on traditional customs.
- Heightened public interest in the issue of using chemical products detrimental to both the environment and human health.
- Unclear national, regional, or international rules and requirements.
- Absence of a set definition and ambiguity of the concept of "quality of life" applied on the local or regional level.
- Companies using simplified findings as the basis for their analyses.
- Attitudes towards the results of studies.
- Information chaos.

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ABSTRACT

Bio-commerce in Latin America

Colombia is a country rich in biodiversity, being recognized as one of the five mega-diverse countries in the world. With a land area of 1.14 million km², barely 0.8% of the world's total land area, Colombia is home to approximately 15% of all known terrestrial species. This makes it one of the countries with the highest concentration of species per unit area. It also boasts the largest number of species of birds and amphibians in the world and holds the top positions among countries rich in vascular plants and vertebrates. Because of this, the use of biodiversity for the production and supply of services has been on the rise in recent times. However, such actions require not only environmental awareness and sustainability, but also clear, enforceable policies to protect both the natural resource exploited by stakeholders and the community at large. The Alexander von Humboldt Institute (2003) defines biocommerce as “an initiative that seeks to create and implement mechanisms to encourage investment and trade in biodiversity-based goods and services, using the criteria of financial, social, and environmental sustainability”.

Keywords: biodiversity, bio-, sustainable development

PART III
SOCIETY

SOCIAL DEVELOPMENT AND SOCIAL MOVEMENTS

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1. Around social development: remarks on interpretations

We must start by establishing the difference between two development concepts: developmentalism and economic growth. In this regard, the concept of developmentalism stands as a fundamental strategy to stimulate the potential of an economy on the micro- and macro-economic level. The exploration of this potential must lead to the well-being of the population, but economic growth has to do solely with increasing the volume of production in a given country (which is measured by gross domestic product). In some cases, when a nation's entire potential is funneled into boosting the production of goods, we remain in the realm of developmentalism, focusing solely on indicators such as income per capita, which is expressed as the total population over the number of produced goods. Income per capita does not reflect the true distribution of wealth in a country, because goods and services do not reach all groups within the population in an equal measure.

Economic development must reconcile the two above aspects: the economic well-being of the population and economic growth. Some argue that growth is possible to achieve without economic development – in this case, we are speaking of developmentalism.

Economic development must advocate for the needs of the population. These should be satisfied through the process of production in the production–distribution–consumption matrix. For this reason, developmentalism focuses

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solely on accelerated production of merchandise, without attention paid to the distribution and consumption phases – and it is precisely in these two phases that the well-being of the population can be improved.

In this sense, people's quality of life depends on their possibility to satisfy their fundamental human needs. According to Max-Neef (1986), fundamental human needs are interrelated and interact. He divides them into two types: existential and axiological. The former category includes the following subcategories of needs: subsistence, protection, affection, understanding, participation, idleness, creation, identity, and freedom.

Therefore, to the extent that we satisfy all the needs of the population, we can speak of social development. When Latin America is concerned, the roughly defined objectives of social development are as follows: to integrate Latin American society into the international economic and political context; to systematize and deepen the knowledge of Latin American society from a historical perspective; to establish a contextual framework for the relationship that exists between reality, theory, models of change, development plans, and the actions taken by different social actors; to analyze the Latin American situation at the political and institutional level, as well as to critically assess its regional impact and its consequences for the processes of participation and organization; to analyze the decentralization process and municipal reforms which are currently underway in Latin America, so that development projects can have an impact on the local social life; to use the issue of social development as an educational tool for change in Latin America.

It should be noted that, from the perspective of social development, education and development go hand in hand. Moreover, education is conceived of as the only effective means of raising quality of life and achieving development, as it offers a new vision of the world, society, and the processes which it undergoes.

2. International and national vision of social development

Today's world is facing great economic, social, political, and cultural changes, with many of the ideas and paradigms of yesteryear reconsidered to give rise to new conceptualizations. For example, we are seeing a new way of conceiving of and discussing development. Namely, we speak of development on a human scale, where the human being is centered as the entity whose potential needs to be fully developed (earlier, the role of humans in development was limited to a production machine). Another topical slogan is sustainable development, which is based on the premise that the present generations are responsible for the state in which they "bequeath" the environment to the generations to come.

Since the Great Depression of the 1930s, humanity has significantly changed the way in which it views the world. Before the crisis, economic

activity was evaluated based on the principles of classical economics, whose main theoreticians included Adam Smith, David Ricardo, Thomas Robert Malthus, Jean-Baptiste Say, or John Stuart Mill. According to Adam Smith, human behavior is naturally driven by six aspects: selfishness, sympathy, the desire to be free, the sense of property, the habit of work, and the tendency to change, trade, and exchange one thing for another. Given these motivations, each person is, by nature, the best judge of their own interest and must, therefore, be left free to satisfy it in the way they see fit. If a person is given liberty, they will not only achieve their own gain but also promote the common good. Adam Smith's belief in the natural balance of the drivers of human behavior suggests that in seeking one's own benefit, each individual is led by an invisible hand to serve an end that goes beyond their own purpose.

However, the classical vision of economics was eventually contested by John Maynard Keynes. He favored the policy of state interventionism, challenging the conceptual foundations of the classical school, which, among others, advocated the freedom of markets and systems based on the principle of "let do, let pass" (French: *laissez faire, laissez passer*).

Keynes opened the door for a new economic reality based on interventions of the state, which brought with itself the planning and foundation of central banks, supervisory bodies, state companies, etc. The Second World War proved the decisive factor in this paradigm change. The sheer volume of resources used in the armed conflict, the area it spanned, the violent course of combat, and many more of its aspects forced all involved countries to engage in state interventionism on an unprecedented scale in order to guarantee the production and mobilization of resources necessary to aim for victory.

The wartime reality triggered the emergence of new policies and new institutions which would underpin the future international system after the end of the conflict. Their aim was to give states capacity to intervene in the economy and, naturally, reflect the new economic and political realities. This was when the International Monetary Fund was established at an international conference held in the North American town of Bretton Woods. Its main objective was to prevent the repetition of the process that led to the 1930s crisis. It was agreed that exchange rates would be pegged to the US dollar instead of gold, and mechanisms were created to protect the countries' financial flows. The conference also saw the establishment of the IBRD (International Bank for Reconstruction and Development), now the World Bank, at the time intended to channel financial resources into the reconstruction of nations under a new peace. Subsequent international conferences ensued. They resulted, among others, in the establishment of the United Nations with the aim of overcoming the limitations of the old, ineffective intergovernmental schemes. The UN was designed to comprise a complex system of agencies empowered to intervene in all aspects of social life. This is how WHO emerged for health-related matters, UNIDO for industry, UNDP for development, UNESCO for culture, FAO for agriculture, or UNICEF for aid to children, to name a few.

The postwar period also saw the creation of a number of supranational organizations pertinent to Latin America, such as the Organization of American States, the Inter-American Development Bank, ECLAC, OPS, and more.

Apart from being a reflection of the new international realities, these initiatives led to the universalization of state interventionism and planning. They constituted a foundation for more concrete action, which in the case of Colombia consisted in the arrival of the Currie Mission in 1950, the first IBRD mission to set its sights on a “Third World” country following the successful conclusion of the reconstruction process in Europe and Japan.

With the creation of a supranational institutional network, as well as with the acceptance of state interventionism as the default approach to economy, the world began a process of drawing up criteria and procedures, designing plans, and formulating theoretical frameworks concerning the causes of underdevelopment and its possible solutions. These were presented to “Third World” countries as guidelines for their internal policies. Consequently, a new vision of development in Latin America emerged.

This is how the United Nations ushered in a development model for Latin America under the slogan of “The Decade of Development”, the supervision of which would be the responsibility of its regional commission – ECLAC.

The executive director of ECLAC was Raúl Prebisch, who proposed that Latin America should undergo an intensified process of industrialization with the view of replacing certain imports which were found to be an obstacle for development with domestic products.

Some theoreticians criticized the fundamental premises of ECLAC’s structuralist approach and advocated an outward-oriented development model, which would be achieved through opening domestic markets to imports, reducing state interventionism, and offering exports incentives.

Parallel to the above conceptualizations of development, other schools of thought emerged, questioning the achievements of ECLAC structuralism, criticizing it for neglecting better-faring sectors of economy in the pursuit of so-called fundamental changes in the structure of production. Some argued, for example, that the structuralists from ECLAC were ignorant of the fact that no development policy would be successful without first and foremost resolving the basic needs in terms of human resources. According to this rationale, structural changes in society cannot occur if the members of society are not guaranteed minimum conditions for subsistence. As a solution to this, an approach focused on basic human needs was proposed. In the early 1970s, the World Bank launched its “Assault on World Poverty” policy, which would give rise to the strategy of Integrated Rural Development (IRD) and implementation of feeding programs in developing countries.

It should be noted, however, that while the industrialized world enjoyed a phase of growth between 1950 and 1960, the 1970s saw a clear deceleration of this trend. The ensuing economic crisis resulted in recession and growing inflation. Latin American countries experienced a severe debt crisis.

Consequently, the “in vogue” theoretical models of development started to prove inadequate, given the fact that they could not help solve the enormous problems marring Latin America.

Following the breakdown of the principles hitherto held as its pillars, the discussion around development has since arguably revolved around transforming models and theoretical frameworks that support structural adjustment policies, as professed by the advocates of neoliberal or neo-structuralist approaches.

The adjustment programs widely popular in the recent decades are based on the following fundamental principles:

- reduction of public spending (which, logically, affects social spending to a proportionally higher degree);
- reduction in investments (which affects the growth rate);
- reduction of imports;
- elimination of exports incentives;
- liberalization of legislation on foreign investments;
- devaluation of currency;
- tax reforms aimed at increasing state income;
- reduction of official spending and cutting public sector wages.

These measures seek to increase the state’s income and reduce its expenses. With this, a country can increase its payment capacity in the short term, but it does so at the expense of economic growth and by severely reducing the quality of life of the population. As a result, adjustment policies have witnessed growing backlash. Reacting to these negative voices, international organizations are working on a new formulation of adjustment policies which would prove acceptable to countries which are heavily indebted or going through a crisis. These new programs seem to hold the following as their baseline principles:

- reduction of state interventionism, pursuing an unplanned economy and deregulation;
- privatization and destabilization of state-controlled sectors of the economy;
- taking the informal sector as the basis for recovery and growth;
- stimulating decentralization processes;
- stimulating democratization processes;
- stimulating foreign investment in order to obtain needed capital;
- economic opening as a strategy for modernizing economies;
- promoting community participation and organization as the unifying factor for the new policy;
- restructuring legislation and institutions.

3. Social development in Colombia

The analysis of social development indicators has shown a relative progress in Colombia, especially in terms of the satisfaction of the population’s basic needs and income distribution. However, if we take a closer look at what the gains of

economic development are and how they are being distributed, we clearly see that certain economic ventures and social groups benefit from them more than others.

According to reports, a high percentage of the country's current population is marginalized and lacks access to resources which would satisfy its minimum subsistence needs. In the collective work *Colombia Hoy* (1991), Jesús Antonio Bejarano states that 45% of Colombians do not have an income sufficient to satisfy their most basic needs, and in the case of 18%, their earnings are not enough to cover their minimum nutritional needs.

Furthermore, nearly 60% of the rural population and approximately 30% of the urban population live in extreme poverty, while 76% of people living in localities with less than 100,000 inhabitants do not have their basic needs met.

To make matters worse, a downward trend in development is evident, with only 60% of Colombians having access to potable water system and only 40% to any type of sewerage and wastewater disposal system. The situation is further complicated by the fact that 35% of the population does not have health insurance and over two million Colombian citizens are illiterate.

As it transpires from the above, the country needs a series of reforms to increase social spending in priority areas. According to Armando Montenegro, former head of the National Planning Department, the "participation of government spending in GDP oscillates around 14%, a figure that is below the average among developed countries, namely 28.9%" (Lora, 1991).

When macroeconomy is studied solely in its technical aspect, with no attention paid to the social dimension, one can reach the same conclusion as eminent economist Manfred Max-Neef, who, reflecting on his long career as an economic researcher, stated:

After a number of years, the enthusiasm and optimism with which I had worked as an economist for several international organizations, gave way to a growing uneasiness. To continue being engaged, whether as a witness or as a direct participant, in efforts to *diagnose poverty*, to *measure* it and to *devise indicators* in order to set up a statistical or conceptual threshold beyond which a percentage may reveal the numerical magnitude of those to be classified as the extremely poor; and then to participate in costly seminars and even costlier conferences in order to communicate the findings, interpret the meaning of the findings (my God!!), criticize the methodologies behind the findings, express our deep concern (often during cocktails) for what the findings show, and, finally, end up with recommendations to the effect that what must urgently be done is to allocate more funds for further research into the subject to be discussed again in other meetings – made me feel at a certain point that I was happily participating in a rather obscene ritual (Max-Neef, 1992, p. 20; emphasis in original).

What do Manfred Max-Neef's contrite ruminations expose? In our opinion, they make us realize that economic science and macroeconomic analysis have been increasingly focusing on ideological debates, and this process has resulted in the inception of stochastic economic models which reduce society to systems of equations.

In his article in *The New Hundred Years*, Stephen J. Turnovsky (1991) points out that economists, and particularly macroeconomists, have been divided over ideological disputes for many years. As a result, countries base their economies on models with a clear ideological bias, aligning all their economic policies with this particular line of thinking. We are currently witnessing it in the case of the stochastic neoliberal model, which is casting its net wide over all countries of the world to “catch” as many of them as possible. And yet, there are still those who believe that macroeconomics should take a more social direction in order to promote socioeconomic development in accordance with the needs of the population.

“Economics [...] is in the service of the larger social good [...]. But in the years ahead I hope that economic conclusions will be less subservient to political need and convenience. [...] [T]he economist must not accommodate to political convenience, so he or she must not be indifferent to the political context and its social and humane constraints” – this is how John Kenneth Galbraith (1991, p. 45) envisioned the economy in the twenty-first century. From his point of view, economics must hold the same goals as social movements, namely it must seek to improve society’s well-being.

4. Conclusions

Two general conclusions may be drawn from the line of argument presented above. Firstly, the idea of social development has always been associated with the search for economic development. However, development is often confused with economic growth and, in some cases, equated with the developmentalist approach. This muddling of concepts makes it more difficult to foster social development. Secondly, social development necessitates the growth of social movements and their cooperation in pursuing this common goal.

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ABSTRACT

Social development and social movements

The topic of social development is continuously gaining momentum in Colombia. What factors contribute to its rise in popularity? We believe that it may be explained by the fact that Colombian leaders are beginning to understand that the country’s population

includes a large sector of marginalized people whose basic needs have to be addressed. That is why, at present, social development is sought as a proposal that consolidates such objectives as placing Colombian society in the international economic and political context and generating democratic and participatory processes at the community level. Hence, true economic development in Latin America can only be achieved with the creation of participatory spaces aimed at strengthening national democracy, creating employment opportunities, and satisfying basic needs. This vision must take into account social development as a means of continuously providing opportunities to all sectors according to their needs, consequently giving voice to the social movements active in various territories that are calling for large-scale social reforms in search of sustainability.

Keywords: social development, social reforms, territorial space

ENVIRONMENTAL FACTORS AND INTERNAL MIGRATIONS IN PERU: EXPLORING ADAPTATION STRATEGIES, HUMAN AGENCY, AND POLICY IMPLICATIONS

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Katarzyna Górka²

1. Introduction

Environmentally induced migration is influenced by a combination of environmental, social, and economic factors, making it a complex phenomenon difficult to define and address (Warner et al., 2010; McLeman & Smit, 2006; Black et al., 2011). For example, while extreme weather events such as floods and droughts can cause population displacement, slower onset changes such as desertification or sea level rise often lead to migration as a proactive strategy to sustain livelihoods (Adams, 2016; Hunter et al., 2015). Peru's extraordinary environmental diversity, which spans the Coast, the Highlands, and the Amazon rainforest, makes it a critical case for studying the interplay between environment and migration (Bergmann et al., 2021). Environmental challenges, such as glacier retreat in the Highlands and deforestation in the Amazon, have exacerbated vulnerabilities in rural areas, disproportionately affecting Indigenous communities and driving migration as both a coping mechanism and an adaptation strategy to climate changes (Altamirano Rua, 2014; Torres-Slimming et al., 2020). Efforts to conceptualise environmental migration have highlighted the importance of distinguishing between voluntary and forced movements and recognising the broader context of vulnerability and resilience within affected communities (Massey et al., 2010; Warner & Afifi, 2014). The absence of universally accepted terminology and legal frameworks further complicates policy responses, necessitating interdisciplinary approaches to better understand and manage these processes (McAdam, 2012).

This study aims to understand how environmental challenges, such as extreme weather events and gradual climatic processes, influence migration decisions and impact livelihoods, sociocultural dynamics, and community

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resilience. It seeks to address three main research questions: 1) How do environmental stressors influence internal migration patterns in Peru? 2) What is the interplay between socioeconomic vulnerabilities and migration decisions? 3) What adaptation strategies are used by communities facing environmental stressors? By situating these questions within the broader discourse on environmental migration, our study aims to contribute to the development of sustainable responses to the impacts of climate and environment on migration. The structure of this chapter is as follows. We begin by providing an overview of key conceptual and terminological issues in the field. This is followed by a narrative review of influential theories and concepts, with an emphasis on the framework for the “drivers of migration” (Black et al., 2011) that informs the analysis of climate and environmental migration. We then explore Peru’s environmental diversity and its internal migration and displacement processes driven by natural disasters, with a particular focus on how environmental factors have influenced migration in the Highlands. This is complemented by an analysis of the consequences of environmental migration, highlighting the adaptation and coping strategies used by communities exposed to environmental hazards and the issue of adequate policies to protect communities and their lands. We conclude by summarising the key findings and their implications.

2. Definitions and terminology

One of the key challenges in migration studies is establishing uniform terminology. Terms like “climate migration” and “environmental migration” are often used interchangeably but denote distinct phenomena. “Climate migration” refers to a movement driven by climate-specific factors, while “environmental migration” encompasses a wider range of stressors. Warner et al. (2010) propose even the term “environmentally induced migration”, which is broadly defined as a response not only to climate change but also to other environmental processes, such as sea level rise, extreme weather events such as hurricanes, and gradual changes such as land erosion. The term “environmental refugee” introduced by environmentalist Norman Myers (1997) is one of the earliest and most contentious in this discourse. Myers used it to describe people displaced by a wide range of environmental and climate factors, framing them as refugees to emphasise the severity of their condition. This terminology contributed to early discussions on legal and policy-related issues surrounding climate and environmental migration. However, the term lacks legal recognition under frameworks like the 1951 Geneva Refugee Convention and the 1967 Protocol Relating to the Status of Refugees, which do not address displacement caused by environmental factors, creating ambiguity around the legal status and protections for such migrants.

The 1984 Cartagena Declaration, adopted by several Latin American states, broadens the refugee definition to include displacement caused by public order

disruptions such as natural disasters. While not binding, its principles have been incorporated into national laws by countries like Peru, making it an adequate legal measure to address at least disaster-induced displacement. Scholars such as McAdam (2012) advocate for recognising “climate refugees” under international law, arguing that they deserve protections similar to those fleeing persecution or war (Mayer, 2011). However, no international legal framework currently recognises forced environmental migrants.

The challenge of defining climate and environmental migration lies in their complex causality, as they often stem from a mix of environmental, economic, social, and political factors. Scholars advocate for a systems approach that considers the interplay of these factors, arguing that attributing migration exclusively to environmental causes oversimplifies this complexity (De Sherbinin, 2020; Cundill et al., 2021). Some scholars focus on direct causality, viewing migration as a reaction solely to climate or environmental impacts, while others adopt a broader perspective, taking socioeconomic factors into consideration. McLeman and Smit (2006) advocate for a nuanced approach, using the term “environmental migration” to capture its interconnected drivers, with climate change as one of many stressors. Warner and Afifi (2014) propose a “climate change-induced mobility” framework that addresses both slow-onset changes and sudden events, emphasising the temporal and spatial dimensions of climate impacts. This highlights the challenge of distinguishing environment-related migration from other migration patterns. Another significant difficulty lies in defining climate or environmental migration on the basis of current methodologies applied in the research. When studying such migration processes, scientists use various approaches, with diverging definitions, interpretations, and outcomes. In order to attain comprehensive knowledge of climate migration, Hunter et al. (2015) emphasise the significance of merging qualitative and quantitative methodologies. They contend that employing a mixed-method approach can better capture the statistical significance, as well as the actual lived experiences of the impacted populations.

The terminology describing environmental and climate migration remains inconsistent, with terms such as “climate refugees” and “environmental migrants” often used interchangeably despite their differing meanings and legal implications. This lack of standardisation creates confusion. Scholars have proposed solutions, including addressing the interdependence of factors, temporal and spatial dimensions, and expressed the need for refined legal frameworks. In this context, a critical gap in the current terminology lies in the limited integration of the lived experiences of migrants and qualitative insights into definitional debates. Combining quantitative data with ethnographic approaches could provide a more comprehensive understanding of the diverse factors that influence migration decisions. Although this study does not propose new definitions, it emphasises the need to critically engage with existing terminologies to clarify their distinctions and implications for policy and research. By focusing on the Peruvian context, this research underscores

the importance of aligning definitions with the lived realities of affected populations, ensuring that frameworks are inclusive and practical for addressing climate and environmental migration.

3. Theories of environmental and climate migrations

Understanding environmental and climate migrations requires exploring a variety of theories and frameworks across academic disciplines, each offering insights into the complex interplay between environmental or climate changes and human mobility. The push-and-pull factor framework is one of the most widely applied theories in migration studies. Research by Douglas S. Massey (Massey et al., 2010) and J. Edward Taylor (Jessee et al., 2016) has built upon this framework, which explains migration as driven by adverse conditions at the place of origin (droughts, floods, or other extreme weather events) and the pull of better environmental or economic prospects in destination areas. Although this approach provides a foundational understanding of migration drivers, it fails to capture the complexity of indirect factors, such as migration policies, social networks, and the role of institutions, which are crucial for a more nuanced analysis.

Another approach focuses solely on environmental degradation and its role in forced mobility. Myers (1997) highlights the link between environmental degradation (soil erosion, deforestation) and the involuntary movement of individuals and groups. This theory of forced environmental migration emphasises that environmental factors can directly drive displacement, which is understood as a coerced migratory movement triggered by threats to life or livelihood, whether due to natural or human-made causes. Displacement is characterised as a high-risk decision often made under significant uncertainty, where staying in place is both dangerous and associated with a lower quality of life (Erdal & Oeppen, 2018). However, the theory primarily focuses on the direct causes of displacement and may overlook structural vulnerabilities, such as poverty and systemic inequality, which also drive migration. Additionally, the binary distinction between voluntary and forced migration in this framework can be problematic, as many migration decisions fall somewhere between the extremes of a continuum and involve a mix of coercion and choice.

The theory of environmental justice emphasises the unequal burden of environmental stressors on marginalised communities, connecting their vulnerability to broader sociopolitical inequities. This approach explores how these groups often face the greatest consequences of climate change and environmental degradation. Bullard (1993) is known for his work on environmental justice and its intersection with migration. Other researchers, such as Barnett (2001) and Adger and Kelly (1999), have conducted research highlighting vulnerability and resilience in the context of climate change and migration. Their theories examine how vulnerability to environmental changes

and the capacity to adapt, or resilience, influence migration decisions. Research within this approach highlights that vulnerable populations are more likely to migrate when faced with environmental stressors. However, by emphasising the disproportionate vulnerability of marginalised communities, the theory may overlook the agency and adaptive capacities of individuals within these groups, potentially portraying them as passive victims rather than active participants in migration and adaptation processes.

Adaptive migration and resilience theory shift the focus from displacement to agency, viewing migration as a proactive strategy to cope with environmental changes. The resilience approach, which represents an adaptive migration theory, suggests that migration can be a proactive strategy for individuals and communities to adapt to changing environmental conditions, enabling them to build resilience against emerging challenges. Warner et al. (2010) and Gemenne (2010) focus on the role of migration as an adaptation strategy within which people may choose to move to areas with better resources or fewer environmental hazards. Similarly, social networking theory highlights the pivotal role of networks in adaptation to climate change and migration. This perspective suggests that people often rely on their social capital to make migration decisions, access information and resources, and secure support for relocation to destination areas. Scheffran et al. (2011) demonstrate that migrant networks, through the transfer of information, technology, remittances, and other resources, can stimulate innovation and enhance social resilience in origin communities. These views underscore the agency and importance of social networks in facilitating adaptation and building resilience, as migrants leverage their connections to navigate challenges. However, these theories often overlook structural barriers, such as unequal access to opportunities, which can significantly limit adaptive potential.

A critical limitation of existing theories is their lack of holistic focus on the multiscalar and context-specific nature of migration. For example, the interactions between local governance, regional environmental policies, and global economic systems are often underexplored. By situating the analysis within the Peruvian context, this study seeks to address these gaps, illustrating how environmental and climate migration overlaps with socioeconomic vulnerabilities and policy issues.

4. Terminology and theoretical framework of the analysis

This section of the chapter is devoted to the conceptualisation of the key terminology, specifically the concepts of environmental-induced migration and adaptation process. Environmental-induced migration refers to the movement of individuals or groups whose decision to migrate is significantly influenced by environmental factors, including sudden-onset events (disasters such as hurricanes or floods) and slow-onset processes (changes such as desertification or

sea level rise). This definition emphasises the role of environmental change as a significant, but not the sole, driver of migration, aligning with the framework of multi-causal migration processes by Black et al. (2011), where climate or environmental change is viewed as an indirect driver of migration that influences primary drivers, such as the already existing economic, demographic, social, political, and environmental factors. In the Latin American context, where environmental variability is closely tied to disruptions in livelihood, an example being reduced agricultural yields due to drought, this term captures the complex relationship between environmental change and migration. Its conceptualisation is grounded in established literature, such as the work by Hugo (1996) and Black et al. (2011), who argue for a nuanced understanding of environmental migration that avoids oversimplification. Hugo describes environmental migration as a “movement that occurs when people are compelled to leave their homes because of changes in their physical environment”, while Black et al. (2011) emphasise the multi-causal nature of migration decisions. By employing this term, the chapter distances itself from deterministic terms like “climate refugees”, which can imply a direct, mono-causal relationship and overlook other factors that mediate migration outcomes, such as socio-economic and political conditions.

Another key term is that of adaptation, which in the context of environmental migration refers to strategies, policies, and actions taken by individuals, households, or communities to adjust to environmental changes and mitigate their adverse effects on livelihoods and well-being. Adaptation can manifest itself in various forms, including migration as a proactive or reactive strategy. Moreover, the framework for the “drivers of migration”, which will be used for the purpose of analysis in this study, was among the pioneering works to highlight the concept of “migration as adaptation” (De Sherbinin et al., 2022), framing it as a critical strategy to address the current and anticipated impacts of climatic and environmental changes (Black et al., 2011). Migration as adaptation is a concept particularly relevant in Latin America, where rural communities in regions like the Highlands or the Amazon basin often rely on mobility to diversify income sources or respond to environmental shocks, such as droughts or floods. The term “adaptation” is also rooted in the work of McLeman and Smit (2006), who examined how people in rural Eastern Oklahoma responded adaptively to environmental stressors during a period of repeated crop failures caused by drought and flooding. The Intergovernmental Panel on Climate Change (IPCC, 2014a, 2014b) defines adaptation as “the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects”. In the Latin American context, putting emphasis on adaptation helps to highlight the agency of migrants and the potential for migration to serve as a coping mechanism rather than solely as a symptom of vulnerability and marginalisation.

The choice of these terms – environmental-induced migration and adaptation – over alternatives like “climate refugees” or “environmental displacement” reflects their appropriateness for the regional context. Terms such as “climate refugees” can evoke legal and political implications that are not universally applicable, particularly given the absence of their formal recognition under international law. Similarly, “environmental displacement” tends to emphasise forced movement, which may not capture the full spectrum of migration dynamics in Latin America, where voluntary and involuntary migration often intersect. By adopting the above indicated terms, our chapter aims to provide a conceptual foundation that aligns with the complexity of environmental migration processes in the Latin American region, ensuring compliance with regional socio-economic, cultural, and environmental realities. These definitions will serve as a basis for analysing environmental-induced migration in Peru, where the combination of environmental, economic, and social factors influences migration decisions and outcomes.

Our analysis is based on the framework for the drivers of migration (Figure 1), which offers a nuanced and comprehensive approach to understanding the interplay between migration and environmental change. Rather than treating environmental migration as a direct and isolated phenomenon, the model conceptualises migration as a response influenced by multiple drivers: economic, social, political, demographic, and environmental. These drivers interact dynamically, with environmental changes affecting them in varying degrees. By situating environmental factors within a broader socio-economic context, the model underscores the complexity and multi-causality of migration, challenging deterministic views that attribute it solely to environmental triggers.

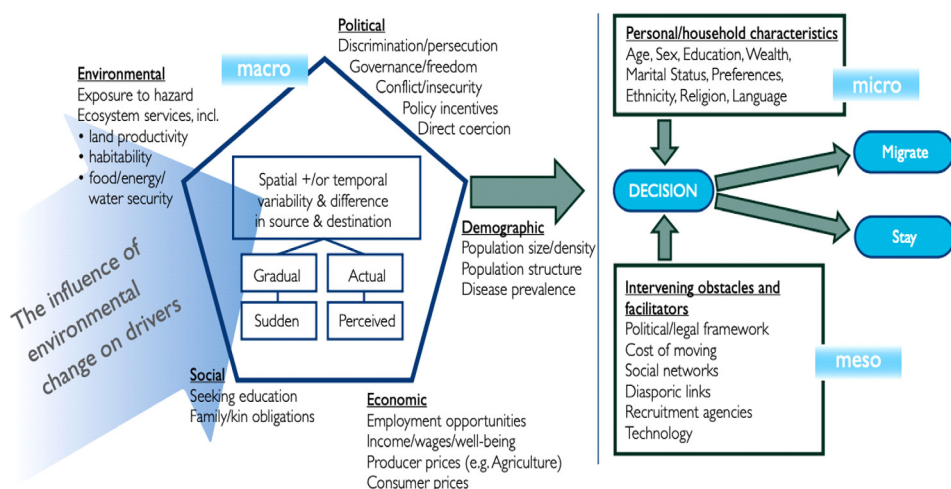


Figure 1. A conceptual framework for the “drivers of migration”

Source: Black et al., 2011

One of the key insights of the model is the recognition that environmental change can act as both a catalyst and a barrier to migration. While events such as droughts, floods, and soil degradation can force individuals to migrate, they can also erode the financial and social resources necessary for migration. This duality highlights a critical dimension of vulnerability: the poorest and most at-risk populations often lack the capital to migrate, which leaves them trapped in environmentally precarious areas. By emphasising the role of interfering factors, such as household resources, social networks, and policy frameworks, the model provides a framework for understanding why migration does not always occur, even in the face of significant environmental pressures.

The emphasis of the framework for the drivers of migration on migration as a livelihood strategy is particularly relevant to Latin America, where environmental changes such as coastal erosion, rising sea levels, and the increasing frequency of extreme weather events have profound implications for rural and urban communities. For example, rural households may resort to migration to diversify income streams when agricultural productivity declines due to environmental stressors. The model also acknowledges the vulnerability of migrants in urban settings, where many may relocate to environmentally risky areas, such as flood-prone neighbourhoods or informal settlements, intensifying their exposure to future environmental dangers.

An important advantage of the framework for the drivers of migration in the Latin American context is its ability to inform targeted policy interventions and social programs. Recognising the interconnectedness of environmental, economic, and social drivers, the model provides insight into how adaptive measures, such as investments in rural development, urban infrastructure, and migration facilitation, can mitigate both the drivers and consequences of migration. Moreover, it highlights the importance of protecting vulnerable populations who cannot migrate, ensuring that they are not left behind in areas increasingly affected by environmental risks. This comprehensive approach makes the framework for the drivers of migration a useful tool for understanding and addressing environmental migration in the diverse landscape of Latin America.

5. Methodology

This study employs a methodological framework grounded in data triangulation (Denzin et al., 2023). To address the complexity and to synthesise existing knowledge and perceptions on environment-induced migration in Peru, this chapter develops a joint methodology combining a narrative literature review with desk research and a case study approach. Narrative review was chosen due to its flexibility and adaptability in exploring a broad range of sources and themes, as it is especially valuable in uncovering nuanced insights that might be overlooked by a strictly methodological approach (Ferrari, 2015). We believe this method is particularly suited for interdisciplinary research that covers

migration studies, environmental science, and regional or socio-economic studies. Unlike systematic reviews, which rely on rigid protocols and comprehensive coverage of all available literature, narrative review enables a thematic exploration of best-evidence and varied sources (Green, 2006; Rother, 2007). A best-evidence synthesis focuses on integrating high-quality methodological studies to address a research question while maintaining a narrative approach. This method ensures credible, balanced conclusions and is particularly useful for studying complex topics where comprehensive but focused analysis is needed.

The review process began with desk research, which helped identify and collect secondary data from academic publications, policy reports, and case studies that offer diverse perspectives on the relationship between migration and environmental change in Peru. Key databases such as Scopus, Web of Science, JSTOR, and Google Scholar were used to find peer-reviewed articles, while governmental and international organisations' websites (such as the International Organization for Migration, United Nations High Commissioner for Refugees, or national environmental agencies) were consulted for policy documents. A keyword-based search strategy was employed using terms such as "environmental-induced migration", "climate displacement", "environment migration drivers", "migration as adaptation", "Peruvian Highlands", and "Peru". This ensured that the review covered a broad spectrum of relevant literature while maintaining a focus on the country and region of interest.

The selected materials, including academic papers, reports, and datasets from Peruvian government agencies, international organisations, and climate research institutions, were then reviewed and categorised based on key themes, including the drivers of migration, the impact of environment, migration patterns, and adaptation strategies. The review incorporated findings from the Foresight (2011) report and Black et al. (2011) and their comprehensive framework of environmental-induced migration, linking global conceptual models to the specific socio-economic and environmental contexts of Peru. This thematic synthesis allowed for the identification of patterns and gaps in the existing research. The desk research method facilitated a pragmatic but careful examination of the literature. By employing this methodological approach, the chapter provides a structured yet flexible analysis, contributing to a deeper understanding of environmentally induced migration in the Peruvian context. Moreover, our analysis is enriched by the selection of specific case studies of the Peruvian Highlands. We believe that the proposed review methodology is best suited to deliver a nuanced synthesis of the drivers, impacts, and patterns of environmental migration in Peru.

6. Peru's natural diversity and climate dynamics

Peru is a key location for studying environmental migration due to its exceptional geographical diversity and rich biodiversity. Traditionally, the country has been divided into three main regions: the coastal plains (*costa*), the

Andes Mountains (*sierra*), and the Amazon rainforest (*selva*). However, Javier Pulgar Vidal (1967) proposed a more refined framework, dividing Peru into eight natural regions: Chala (coastal desert), Yunga (warm valleys), Quechua (highlands), Suni (high Andean plateau), Puna (high grasslands), Janca (glacial peaks), Rupa-Rupa (high jungle), and Omagua (Amazon lowlands). This classification captures the dynamic interaction of altitude, climate, and ecosystems, with a particular focus on transition zones, and is mostly valuable for understanding Peru's environmental and cultural complexity, as it integrates natural and human factors more comprehensively than the triple structure model.

Each of these eight regions shapes the country's socioeconomic and cultural fabric while confronting distinct environmental and climatic challenges. The coastal desert, while highly urbanised and economically significant, is increasingly threatened by rising sea levels and periodic flooding, both intensified by El Niño events (Peng et al., 2019). Extreme precipitation that causes floods is a consequence of warm coastal sea surface temperatures and weakened trade winds (Son et al., 2019). Anzualdo et al. (2024) report that over the past 30 years, Peru has experienced a rise in average temperatures. In the Coast region, the current annual average temperature now ranges from 21.1 °C to 22.6 °C. The Amazon region, comprising Rupa-Rupa and Omagua, is mainly impacted by deforestation and shifting rainfall patterns, causing ecosystems and livelihoods to be disrupted. A study by Torres-Slimming et al. (2020) shows how climate change affects Indigenous communities by impacting water systems, leading to health and livelihood challenges, as in the case of Shawi communities, which have observed changes such as increased flooding and warmer river temperatures due to deforestation and reduced tree cover. In the Andes, the subregions of Yunga, Quechua, Suni, Puna, and Janca face significant climate-related risks, including glacier retreat, water scarcity, and extreme weather events, which will be explored in detail in the sections below.

Peru is also one of the most disaster-prone countries in South America, regularly experiencing floods, landslides, earthquakes, and the effects of El Niño. These natural hazards, exacerbated by climate change, pose significant risks to infrastructure, livelihoods, and community stability (Germanwatch, 2019). Between 2008 and 2022, more than 690,000 people were internally displaced due to natural disasters, with the Highlands bearing the brunt of these impacts (IDMC, 2023). Flooding, often exacerbated by deforestation and poor land management, is the most common cause of displacement, followed by landslides triggered by heavy rainfall (Milan & Ho, 2014). These events not only result in the loss of homes and infrastructure but also force affected populations to migrate to urban areas, where they often face challenges such as informal employment and inadequate housing.

The Peruvian economy has shown significant growth in recent decades, driven by mining, agriculture, and tourism. However, this growth has been unevenly distributed, leading to regional disparities. Urban areas, particularly

in coastal regions, have benefitted disproportionately, leaving the highlands and rainforest regions economically disadvantaged (Sánchez Aguilar, 2015a). As a result, internal migration patterns in Peru often reflect these inequalities, with individuals and families seeking opportunities in urban centres like Lima, which alone accounts for nearly a third of the country's population (INEI, 2018).

Structural inequalities, including poverty and limited access to education and healthcare, amplify the impacts of climate change, particularly for marginalised groups in the Highlands and Amazon regions (Oliver-Smith, 2014; Torres-Slimming et al., 2020). This combination of socio-economic disparities, geographical challenges, and environmental risks has contributed to Peru's complex internal migration dynamics. These dynamics can be understood through the lens of multiple burdens, where vulnerable populations face the compound challenges of environmental degradation, social marginalisation, and economic precarity. Therefore, migration emerges as both a coping mechanism and a response to systemic vulnerabilities.

7. Internal migration in Peru

There have been significant demographic changes in Peru since 1940, including a notable population shift from the Highlands to the Coast (Matos Mar, 2016; INEI, 2018). The Coast and Highlands of Peru have experienced significant demographic shifts, nearly reversing their respective shares of the country's total population. In 1940, 28 percent of the population lived in coastal zones, while 65 percent resided in the Highlands. By 2017, these proportions had changed to 28 percent in the Highlands and 58 percent in the Coast. These demographic reconfigurations not only reflect past trends but also provide insight into how future climate migration patterns may evolve (Bergmann et al., 2021).

The population of internal migrants within Peru is illustrated in Figure 2. Until 2017, Peru was undergoing significant internal migration, predominantly characterised by rural to urban shifts. From the 1940s to 2015, rapid urbanisation drove significant migration from rural Highlands and Amazon regions to urban centres, with Lima emerging as the primary destination for those seeking better economic opportunities and public services (El Peruano, 2015). This trend was further intensified by the internal conflict in the 1980s and 1990s, solidifying Lima's role as the main hub for internal migration. Coastal regions attracted considerable population inflows due to their more dynamic economies, while the Highlands experienced depopulation as residents were leaving in search of improved livelihoods. Similarly, Amazonian departments such as Loreto, Ucayali, and Madre de Dios witnessed migration patterns driven by economic activities, notably agriculture and mining (Plataforma del Estado Peruano, n.d.).

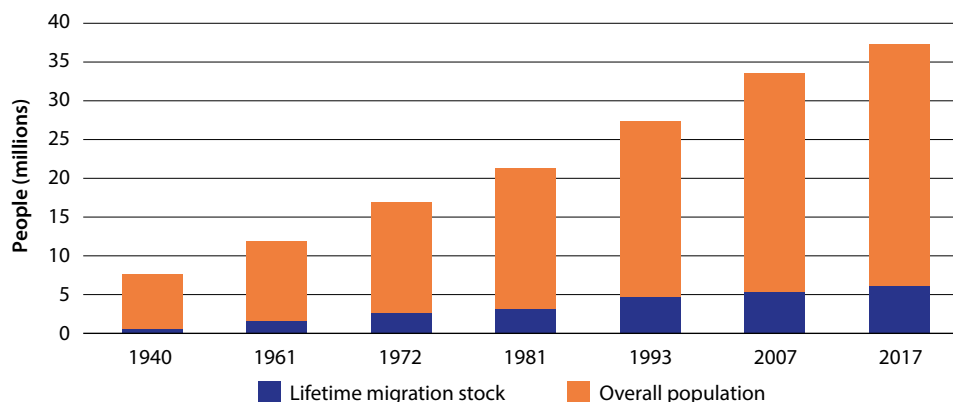


Figure 2. The number of internal migrants within Peru relocated between regions, compared to the general population, from 1940 to 2017

Source: Bergmann et al., 2021 (based on INEI, n.d.)

Since the 1940s, Peru has witnessed significant internal migration driven by agrarian crises, economic downturns, and internal conflict. Although the nation's population has grown substantially, the proportion of internal migrants relative to the total population has remained steady since the 1980s. Migration trends in recent decades have shifted from rural to urban areas and from economically disadvantaged regions to wealthier ones (Sánchez Aguilar, 2015a). In 2017, Peru's population was approximately 31.2 million (INEI, 2018), with 19.5 percent (around 5.3 million people) residing in a region other than their birthplace. This figure is higher in Lima, reaching 32.7 percent. Additionally, up to 35 percent of the population (about 10.2 million individuals) lived in a district different from their place of birth (Sánchez Aguilar, 2015b).

8. Internal displacement in Peru due to natural disasters

Peru is among the three South American countries most affected by climate change (Germanwatch, 2019), with natural disasters now displacing more people than conflicts (IDMC, 2023). As shown in Figure 3, between 2008 and 2022, there were 691,000 internal displacements linked to natural disasters.

In total, 251 natural disaster events were reported between 2008 and 2022. Most were related to floods with 612,000 displacements, followed by earthquakes with 30,000 and storms with 28,000 displacements, as shown in Figure 4.

Natural disasters inflicted severe damage to both individuals and their environments, resulting in loss of life, missing persons, injuries, and extensive damage. Furthermore, the destruction extended to critical infrastructure, including residential structures, educational institutions, and healthcare facilities, which suffered extensive damages (IDMC, 2023). According to the National Household Survey (ENAHU) conducted by the National Institute of Informatics

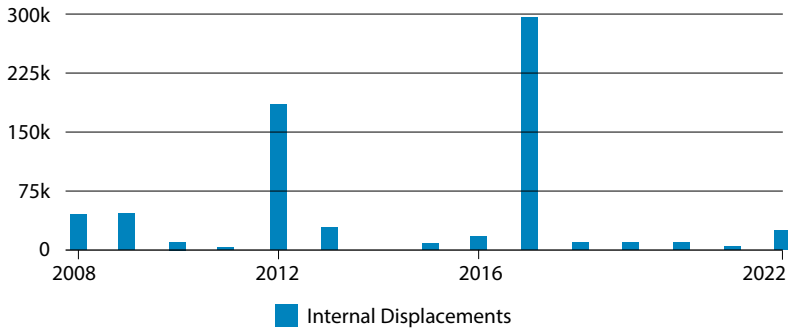


Figure 3. Internal displacement in Peru due to natural disasters between 2008 and 2022
Source: IDMC, 2023

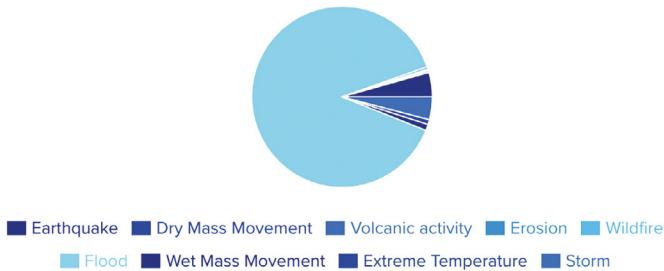


Figure 4. Natural disaster events reported in Peru between 2008 and 2022
Source: IDMC, 2023

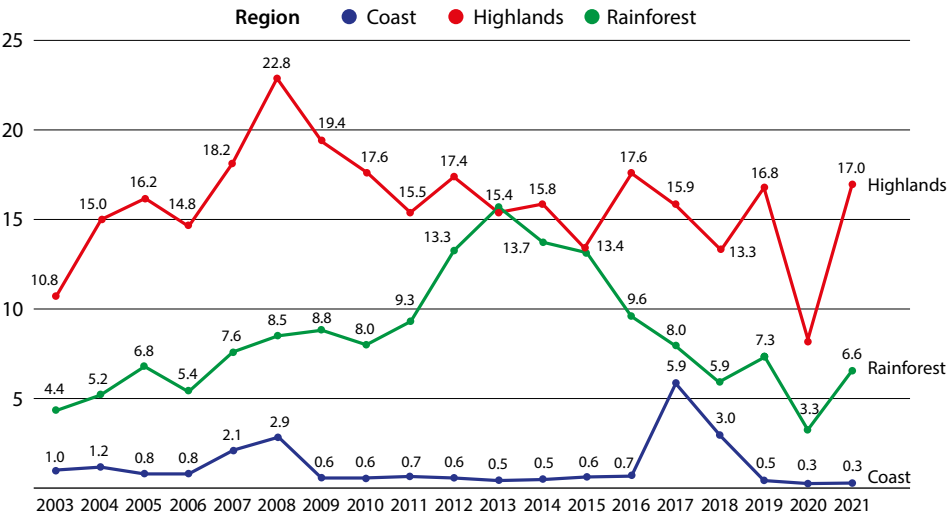


Figure 5. Percentage of the population affected by a natural disaster in the Highlands, the Rainforest, and the Coast of Peru between 2003 and 2021 (in thousands)
Source: The author's elaboration based on data from INEI

and Statistics in Peru, the greatest proportion of population affected by a natural disaster between 2003 and 2021 was located in the Highlands, as in Figure 5 (INEI, 2023). For that reason, this region was chosen for a more profound analysis in the following sections.

9. Environmental factors as triggers for migration in Peruvian Highlands

In the Highlands of Peru and the subregions of Yunga, Quechua, Suni, Puna, and Janca, communities face a multitude of environmental stressors, often centred around water, thus aligning with the framework for the “drivers of migration”. These hazards, which occur concurrently or in rapid succession, compound other challenges faced by these communities (Perez et al., 2010). Climate change often further amplifies existing risks (Oft, 2009). Hazards are locally diverse. Although existing research indicates Yunga, 500–2000 metres above sea level (MSL), as the region experiencing the highest impact of the climate change (Bax et al., 2021), the in-depth analysis suggests profound environmental changes in other regions of the Andes.

In a study performed in the Puno region, six communities listed at least five different types of disasters that affected them. Most often, these were frost, drought, flood, hail, snow, and wind (Sperling et al., 2008). This area corresponds to the Suni region in Pulgar Vidal’s typology, confirming that the more elevated subregions are equally prone to environmental stressors. Furthermore, communities in regions like Cusco, as well as Suni, struggle with cold temperatures (Cavagnoud, 2018). There are also hazards connected to frost, as well as ice, along with snowfall (Lennox & Gowdy, 2014).

Similarly, Janca, which is the highest region in the country, faces another challenge that resides in exposure to changing temperatures and deglaciation. Aragón et al. (2018) demonstrated the impacts of high temperatures and extreme heat on agricultural livelihoods in the Highlands. According to their survey in the Cordillera Blanca, 94 percent of respondents perceived an increase in heat, although no specific quantitative data on temperature increases were reported. In addition to rising temperatures, people, animals, and crops in the Highlands are exposed to stronger solar radiation (López-i-Gelats et al., 2015). Glacier retreat is one of the most visible indicators of climate change in the Janca region, with the Cordillera Blanca losing an average of 40.5 percent of its glacier coverage and tropical glaciers shrinking by 28.17 percent between 1996 and 2019 (Anzualdo et al., 2024). This retreat has far-reaching consequences, particularly in water availability, agriculture, and social dynamics. Glacier melting alters streamflow patterns, exacerbating water scarcity during the dry season (López-i-Gelats et al., 2015). It also increases the risk of glacial lake outburst floods, which threaten lives and disrupt agricultural productivity, often prompting rural-to-urban migration (Lozano-Povis

et al., 2021). As glaciers shrink, contaminants stored in the ice are released, further compounding water quality problems (Alata et al., 2018). Parallel environmental challenges include shifting rainfall patterns, such as delayed rainy seasons, abrupt seasonal changes, and altered intensities. These shifts result in more frequent extreme rainfall events or decreased overall intensity (Wrathall et al., 2014; Alata et al., 2018), contributing to floods, mudflows, and landslides (Adams, 2016; Milan & Ho, 2014).

The socio-economic impacts are equally profound and experienced in all regions below Janca, as they depend directly on snow and water resources in the highest parts of the mountains. Glacier retreat disrupts agricultural productivity, leading to water use conflicts and increased migration pressures (Altamirano Rua, 2014). It also affects tourism, particularly in areas like Áncash, which belongs to the Quechua region, where the loss of glaciers diminishes recreational and aesthetic ecosystem services (Altamirano Girao, 2012). Indigenous communities face additional challenges, with glacier loss affecting social cohesion and cultural heritage (Altamirano Rua, 2014).

People in Peru's Highlands have had to adapt to harsh climatic conditions for centuries. However, the intensifying impacts of climate change, such as prolonged droughts, unpredictable rainfall patterns, and glacier retreats, now exacerbate existing vulnerabilities. Socioeconomic factors, such as poverty, insufficient resources, lack of property rights, reduced soil quality, inadequate basic infrastructure and services, and limited access to quality education, further compound these challenges (Oliver-Smith, 2014; Koubi et al., 2016). Although agriculture remains a cornerstone of livelihoods in these areas, constrained options for diversification increase the risks associated with environmental stressors (Bergmann et al., 2021; Bergmann, 2024). Natural hazards, increasingly frequent and severe due to climate change, amplify these risks, causing crop loss, reduced yields, poorer agricultural produce, outbreaks of infectious diseases, loss of livestock, biological diseases in crops, biodiversity depletion, housing damage, and, in extreme cases, loss of life (Cavagnoud, 2018).

10. Adaptation strategies to environmental stressors

Households in the Highlands of Peru exhibit a diverse range of coping and adaptation strategies, demonstrating a significant role of human agency (Bergmann et al., 2021; Bergmann, 2024). Some households with more economic resources tend to focus on accumulating livestock and engaging in textile manufacturing. Less affluent households lean toward market integration and asset diversification, sometimes even abandoning pastoralism (López-i-Gelats et al., 2015). Small-scale farmers, confronted with precipitation variations and glacier retreats, migrate to urban areas to seek alternative livelihoods (Heikkinen, 2017). Risk reduction strategies among high-altitude pastoralists in Áncash revolve around leveraging ecosystem opportunities and diversifying livelihoods

beyond farming activities. These communities actively conserve resources to prepare for unexpected shocks. Over time, they have expanded their income streams within livestock-related activities through strategies such as animal diversification, improved livestock care, and improved product quality. This diversification extends to a wider range of outputs, including wool, meat, milk, and cheese, contributing to greater economic resilience (Alata et al., 2018).

In response to escalating temperatures, farmers in the Highlands adopt various measures. They sell livestock, employ their children, and dedicate extra time to off-farm activities (Aragón et al., 2018). They also adapt by transitioning to more resilient and versatile crops while addressing water scarcity through peer assistance as a key coping mechanism (Oft, 2009). Other commonly employed strategies include seeking credit, reducing expenses, taking on additional work, selling livestock, adopting a wait-and-see approach due to limited options, or opting for temporary migration. A study conducted in Cusco revealed that the primary coping strategy among small-scale farmers involves reducing their dependence on agriculture by planting fewer crops. Many have abandoned traditional crop rotation techniques, a decision that can have detrimental effects on soil quality (Lennox & Gowdy, 2014).

Migration emerges as an integral aspect of the social fabric in many highland communities. In particular, in certain villages in the Puno region, almost all households have migrant members who predominantly gravitate toward urban centres (Cavagnoud, 2018). A significant proportion of migrants' family members identify "environmental problems" as a factor influencing migration decisions. Beyond permanent migration, circular movements also hold prevalence (Bergmann et al., 2021; Bergmann, 2024). Some highland communities use migration as a proactive measure to anticipate or respond to hazards (Sperling et al., 2008). Temporal migration is a crucial diversification strategy among highland subsistence farmers, with 54 percent of households having at least one member participating in temporal migration (Bergmann et al., 2021). In Áncash, in response to glacier retreat, family members, often young adults, are encouraged to migrate to urban areas to financially support their families back home (Wrathall et al., 2014). Similarly, in Junín, migration is a prevalent response to water scarcity associated with glacier retreats and changing rainfall patterns (Altamirano Rua, 2014).

In Suni and Puna regions' high-altitude communities living above 3,900 m MSL, migration is identified as the second most crucial coping strategy in response to food scarcity. The primary strategy involves diversifying income sources beyond agriculture, such as engaging in wage labour or small-scale commerce, to improve household resilience against environmental and economic stressors. This approach reduces the dependence on subsistence farming, which is increasingly vulnerable to climate variability and change. On the contrary, at elevations between 3,200 m MSL and 3,600 m MSL, only nine percent of households resort to migration as a coping strategy to address food scarcity (Milan & Ho, 2014; Ho & Milan, 2012). Koubi et al. (2016)

assert that migration decisions are influenced by individuals' perceptions of environmental hazards and their rate of development, with gradual, long-term climatic changes, such as drought, reducing the likelihood of migration, while abrupt, rapid-onset events, such as floods, significantly increasing the propensity for mobility. Cavagnoud's (2018) study of five communities in Puno concluded that "environmental problems" constitute the second most significant motivator for migration, accounting for 21 percent, with access to work being the primary motivator. It also highlights the deep interconnections of environmental and economic factors and perhaps greater adequacy of the term "environmental migrant".

In addition, Indigenous ecological knowledge provides invaluable information for adapting to climate change and addressing environmental stressors, particularly in regions such as the Andean Highlands and the Amazon, where local communities face numerous challenges. Studies highlight the sophisticated ways in which Indigenous and rural populations perceive and respond to environmental changes, often surpassing institutional actors in their contextual precision and practical applications. According to Altea (2020), smallholder farmers in the Inter-Andean sector of the Amazon region report changes in the rainy season, increased temperatures, and the rise of extreme weather events. They connect these changes to tangible impacts on their livelihoods, such as reduced crop yields, increased coffee rust, disruptions to agricultural calendars, and the emergence of diseases. Their experiential knowledge contrasts with regional institutions, which often struggle with limited historical climate data and rely on top-down interventions. Similarly, the study of Paredes and Kaulard (2022) on conservation efforts in San Martín revealed how narrowly authorised knowledge systems, those privileging state-led or institutional frameworks, obscure the broader historical and agrarian context, perpetuating injustices related to land use, deforestation, and authoritarian relationships between the state and local communities. This underscores the necessity of integrating Indigenous and local knowledge systems into climate and environmental governance. Traditional agricultural techniques, such as terracing and agroforestry, and community-based ecological stewardship practices exemplify adaptive strategies that are both sustainable and culturally aligned. By elevating bottom-up perspectives, policymakers can craft climate strategies that are both effective and equitable, ensuring that local voices shape the solutions to global challenges.

11. Consequences of environmental migration and the policy response

Environmental migration has profound consequences for both the sending and receiving areas, particularly in agricultural communities. When individuals migrate, their departure often leads to labour shortages, disrupting traditional

agricultural practices, rituals, and local ecological knowledge, which exacerbates vulnerabilities to future environmental changes (Lennox & Gowdy, 2014). Additionally, migration depletes the communities' ability to predict weather patterns and weakens their adaptive potential as they lose both human resources and ancestral expertise (Sperling et al., 2008; López-i-Gelats et al., 2015). Migrants, meanwhile, frequently settle in areas prone to hazards, such as informal settlements on riverbanks, unstable slopes, or regions with limited access to water, exposing themselves to increased risks (Altamirano Girao, 2012; Oliver-Smith, 2014). The gender-based nature of migration introduces additional complexities. For example, in villages like those in Junín, where primarily men and young adults migrate, women are left to shoulder increased workloads and emotional stress (Milan & Ho, 2014). Indigenous communities, in particular, experience cultural and spiritual disconnection as migration erodes traditional rituals and the reciprocal relationship between humans and nature. This change is often linked to younger generations leaving ancestral lands or commodifying cultural practices, which Indigenous worldviews interpret as contributing to climate change by undermining their traditional harmony with the environment (Bergmann et al., 2021).

For those who remain in sending areas, migration triggers significant social impacts, including family separation, neglect of older relatives, and strained interpersonal relationships. Migrants often face challenging circumstances in their new environments, particularly if they are rural-to-urban migrants whose agricultural skills may not translate to urban job markets. Many are forced into informal or precarious employment, faced with exploitative conditions, food insecurity, or unemployment. This problem is acute for migrants displaced by climate events such as floods, who lack qualifications for stable employment and often end up in zones exposed to hazards with inadequate infrastructure and services. Climate hazards, such as water stress and increased environmental risks in these destination areas, further exacerbate their vulnerability (Bergmann et al., 2021; Bergmann, 2024).

In that context, Peru's policy framework exemplifies some progress in managing environmental risks and migration. The National Policy for Disaster Risk Management (PNGRD), established by Law No. 29664 (Instituto Nacional de Defensa Civil, 2021) and regulated by Supreme Decree No. 038-2021-PCM (Presidencia del Consejo de Ministros, 2021), emphasises prevention, mitigation, preparedness, and response to disasters. This policy aligns partially with international standards such as the Sendai Framework for Disaster Risk Reduction but places greater emphasis on rapid-onset disasters like floods and earthquakes. However, it inadequately addresses slow-onset phenomena such as glacier retreat and desertification, which are significant drivers of migration in Peru. Existing forest law reforms further complicate this landscape by exacerbating environmental degradation and undermining Indigenous land rights. These legal frameworks often prioritise short-term economic gains over long-term sustainability and equity.

Incorporating Indigenous practices into national adaptation strategies offers a promising path forward. Indigenous communities have invaluable ecological knowledge that can inform sustainable land management and climate adaptation. Co-designed policies that respect Indigenous rights and integrate their expertise are essential to achieve equitable solutions. Strengthening land tenure systems is another critical step, particularly in mitigating potential unintended consequences of international regulations such as the EU Deforestation Regulation (EUDR). While the EUDR aims to combat deforestation by banning imports of commodities linked to illegal practices, its introduction has inadvertently encouraged certain Peruvian actors to exploit emerging legal loopholes. In response to the EUDR, Peru passed controversial amendments to its Forest and Wildlife Law, which effectively pardoned historical illegal deforestation, facilitated the re-zoning of forested areas for agricultural use, and weakened forest protection measures. These changes primarily benefit large companies involved in deforestation. Moreover, by undermining Indigenous land rights and cultural practices, the repercussions extend beyond environmental harm, severely impacting Indigenous communities, whose ancestral lands and livelihoods are increasingly at risk (Peña Alegría, 2024). Enhanced protections for Indigenous territories and equitable land use reforms can help ensure cultural and environmental sustainability. Community-centred risk reduction strategies are vital for empowering populations to adapt in place. Investments in resilient infrastructure, sustainable agriculture, and localised disaster preparedness can alleviate displacement pressures while building adaptive capacity.

Collaborative governance models in which displaced populations actively engage with government agencies in policy development and implementation offer a compelling framework for creating inclusive, context-sensitive solutions. Such participatory approaches not only improve the technical and cultural relevance of policies but also address long-standing issues of trust and accountability (Schmitt et al., 2023). Peru's environmental policy landscape underscores the urgent need for integrated, equitable, and inclusive strategies to address climate-induced migration. While existing frameworks such as the PNGRD represent steps forward, they fail to address the full spectrum of environmental risks and their social consequences. A holistic approach that balances sustainability, livelihoods, and equity is essential for empowering communities to adapt to environmental and socioeconomic challenges while fostering resilience in the face of a changing climate.

12. Conclusions

Peru's resilience presents a complex picture, with certain indicators suggesting progress while others implying stagnation or regression. Many Peruvians face compounded challenges that are increasingly exacerbated by the impacts of climate change, including glacier retreats, hydrological extremes, and rising

temperatures. Historical inequalities, particularly the marginalisation of high-land communities, have further undermined their ability to adapt, leaving many already vulnerable populations even more exposed to environmental risks. Displacement caused by weather-related events has long been a feature of Peru's history, with floods often identified as a significant driver. Individuals whose livelihoods are affected by climate-related factors are frequently relocated from rural to urban areas, predominantly from the Highlands to the Coast. Although internal migration often functions as an adaptation strategy, it also underscores regional disparities and the persistent social and economic vulnerabilities that migrants face. Many Peruvians have developed coping mechanisms to sustain their livelihoods and build resilience. The increasing influence of climatic factors on broader migration patterns underscores the complex interplay between environmental, social, and economic forces. The Black et al. (2011) framework for the drivers of migration highlights how these multifaceted factors interact dynamically to shape migration and immobility patterns, offering a valuable tool for understanding these processes.

The multiple burdens faced by migrants and immobile populations alike – environmental degradation, social disruption, and economic precarity – underscore the need for integrated and equitable solutions. Policies must prioritise community-centred solutions that minimise the need for displacement by ensuring investments in resilient infrastructure, sustainable agriculture, and localised disaster preparedness. Collaborative governance models in which displaced populations work alongside government agencies to co-design and deliver public services offer a transformative pathway for addressing these intersecting challenges. These models ensure that solutions are inclusive, context-sensitive, and rooted in the lived realities of affected populations, fostering long-term resilience and community empowerment. Indigenous communities require special attention, as they are disproportionately affected by environmental changes due to their reliance on natural resources and a history of marginalisation. Protecting their cultural heritage, integrating traditional ecological knowledge into adaptation strategies, and protecting land rights are critical steps in fostering resilience. Strengthening land tenure systems is particularly important to enhance protections for Indigenous territories and ensure equitable land use reforms. In addition, programmes for return migration could support adaptation and resilience building by drawing on the cultural knowledge and economic contributions of those who have left their communities. The Cartagena Declaration provides a valuable framework for extending protection to people displaced by disasters, particularly when such events disrupt public order, a principle already incorporated into Peru's legislation. However, adaptation measures should prioritise community-centred solutions, including co-designed risk reduction strategies and improved infrastructure that reduces the need for displacement in the first place. Rather than relying on large-scale relocation or regrouping of rural populations, as observed in other contexts, the approach should empower affected communities to

remain resilient within their environments whenever possible. By addressing the interconnected challenges of climate-induced migration and immobility, Peru has an opportunity to develop forward-looking policies that protect its most vulnerable populations while fostering long-term resilience.

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ABSTRACT

Environmental factors and internal migrations in Peru: exploring adaptation strategies, human agency, and policy implications

This study explores how environmental factors, including climate change, shape internal migration and immobility in Peru. Using the framework for the “drivers of migration” devised by Black et al. (2011), it examines the complex interplay between environmental factors, systemic inequalities, and human mobility. The analysis highlights the overlapping environmental, social, and economic challenges faced by migrants and immobile populations, which can be seen as multiple burdens. The methodology includes a narrative review of the literature and analysis of secondary data, such as public statistics. Adaptation strategies and human agency are emphasised, illustrating that migration and immobility are not uniform or predetermined responses to natural threats, but vary between individuals and households. Migration is analysed as an adaptation strategy in areas prone to risk, often accompanied by challenges such as informal labour, family separation, and cultural dislocation, while immobility is examined as a condition that increases vulnerability among those unable to relocate. This study highlights the potential of collaborative governance models, wherein displaced populations work with government agencies to co-produce public services, ensuring that durable solutions align with local needs. It underscores the need for policies that address not only climatic vulnerabilities but also the historical marginalisation of communities and their limited access to resources, advocating for equitable and sustainable responses to the multifaceted impacts of environmental factors on internal migration and immobility in Peru.

Keywords: environmental migration, climate change, internal displacement, Peru, adaptation strategies

CHALLENGES OF EXPONENTIAL DEVELOPMENT IN LATIN AMERICA THROUGH THE LENS OF AN EDUCATION MODEL FOR A SUSTAINABLE FUTURE WITH SOCIAL RESPONSIBILITY

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1. Introduction

In the current era, the world is facing a number of unprecedented challenges that require an innovative and sustainable response. Latin America, as one of the richest regions in terms of biodiversity and natural resources, is no stranger to this reality. To drive its growth and development, it is essential to adopt an approach that fosters resilience, social responsibility, and environmental awareness. In this context, exponential development seems a promising way to move towards a sustainable future, being considered an approach that seeks to enhance accelerated and transformative growth in various areas of society by taking advantage of the power of technology, connectivity, and innovation (Mendiluza & Jiménez, 2018). In the educational context, this approach acquires special relevance, since it implies a comprehensive review of traditional models to adapt to the needs and challenges of the twenty-first century.

In this article, we will explore how exponential development can influence the Latin American region, putting particular focus on the Exponential Education Model as a catalyst for a sustainable future with social responsibility. In this look towards what lies ahead, we propose to consider the synergy between exponential development, basic sciences, and connectivism, with a firm commitment to the care of the environment. The Exponential Education Model challenges traditional educational structures, promoting dynamic, interconnected learning oriented toward solving complex problems. By linking this approach with the promotion of environmental care, we gain a powerful opportunity to educate conscious citizens committed to the protection and preservation of the natural environment.

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We apply a reflective and critical approach in order to identify the challenges that Latin America may face in the implementation of the Exponential Education Model, as well as the opportunities that arise to foster a collective vision of a sustainable future. The path to sustainability and social responsibility is complex, but by embracing exponential development and its essential components, we can devise a route towards a society that is more conscious, equitable, and harmonious with the environment. With this look towards the future, we aim to promote constructive debate and concrete actions that drive progress towards a more promising tomorrow for the generations to come.

2. Materials and methods

The article was written on the basis of a meticulous and rigorous literature analysis, including various secondary sources, official documents, academic reports, and relevant reference materials on the challenges of exponential development in Latin America and its relationship with the education model for a sustainable future with social responsibility. The methodology consists in literature review and synthesis following an exhaustive search for relevant studies in academic databases and virtual libraries. In line with the applied selection criteria, the paper only refers to materials related to the topic and containing updated and verifiable information. Once the materials were collected, they were analyzed systematically and in detail, using an analysis matrix to extract relevant data on the challenges of exponential development in the region and the way in which the education model can contribute to a sustainable future with social responsibility.

During the analysis, trends, patterns, and common approaches were identified, as well as differences and contrasts in the strategies adopted by various authors in Latin America. Additionally, the quality and credibility of the sources was ensured through proper citation of the references used to support the findings presented in the article. This review provided a solid knowledge base to understand and address the challenges of exponential development in Latin America from the perspective of the educational model for a sustainable future with social responsibility. As a result, the analysis generated valuable reflections and recommendations to promote sustainable development in the region and foster an education model that shapes responsible citizens committed to collective well-being and environmental protection.

3. Results

3.1. Exponential development in Latin America: concept and importance

Exponential development is based on the principle that various technologies, innovations, and scientific advances grow in a rapid way, generating an exponential impact on multiple aspects of society thanks to the capacity of these

technologies to improve and perfect themselves, which leads to rapid evolution and amplifies their potential.

One of the fundamental characteristics of exponential development is the network effect, namely a phenomenon in which each time a new person or organization adopts a technology, it benefits all the already active users, creating a cycle of growth that accelerates over time (Canazza, 2018). The effect creates large-scale interconnection of individuals, organizations, and systems, facilitating the transfer and access of information on a global level.

Exponential development acquires particular relevance in the Latin American context due to the challenges and opportunities that the region is facing. The adoption of emerging technologies, such as artificial intelligence, machine learning, and robotics allows us to position ourselves at the forefront of innovation and generate creative solutions to historical problems (Guimard, 2023). The adoption of the philosophy of exponential development in Latin America is essential for accelerating economic and social growth while concomitantly promoting sustainability and environmental responsibility (Oszlak, 2020). Emerging technologies can drive the creation of new markets, improve productivity, and facilitate financial inclusion (Castells, 2019), which in turn contributes to the reduction of poverty and inequality in the region.

Moreover, exponential development is a powerful tool to address the environmental challenges that Latin America is facing. The application of artificial intelligence for the management of natural resources, monitoring biodiversity, and predicting extreme climate events allows us to make more informed and efficient decisions for the protection of the environment. Likewise, the exponential approach encourages collaboration and creation of innovative ecosystems that involve different actors: from academic and government institutions to companies and entrepreneurs. This collaboration helps devise comprehensive and sustainable solutions that address environmental challenges from a multidisciplinary perspective.

Education also plays a fundamental role in promoting exponential development by teaching digital skills, critical thinking, and problem solving, preparing new generations to face the challenges of a constantly changing world. Incorporating pedagogical approaches such as connectivism and project-based learning allows the development of relevant skills for a sustainable future. Without a doubt, exponential development in Latin America represents an opportunity to promote transformative and sustainable growth. By adopting emerging technologies and fostering collaboration, the region can move towards a more prosperous and equitable future in which environmental conservation is a fundamental pillar for the development and well-being of its inhabitants.

3.2. The Exponential Education Model: fundamentals and characteristics

The Exponential Education Model is based on several pillars developed to help redefine education and adapt it to the needs and challenges of the twenty-first

century. These pillars are the basis on which a more dynamic, collaborative pedagogical approach aimed at developing students' skills is built.

- i. **Student-Centered Learning:** in the Exponential Education Model, the student becomes the active protagonist of their own learning process (Molina et al., 2018). The traditional teacher-centered approach is abandoned to make way for personalized teaching that adapts to the needs, interests, and pace of each student. This philosophy, in addition to promoting students' motivation and commitment to learning, improves their capacity for self-management and autonomy, essential skills for life in knowledge society.
- ii. **Personalization and Flexibility:** the Model seeks to overcome the "one size fits all" approach prevalent in traditional education and promotes the personalization of the educational experience. It acknowledges that each student has different learning styles and a different pace of assimilating knowledge, which is why it adopts a flexible and adaptive methodology. Technology plays a fundamental role in this aspect, since it allows us to offer personalized educational resources and contents, as well as to monitor academic progress individually for each student.
- iii. **Interdisciplinary Learning:** the Model encourages interdisciplinary learning, breaking down barriers between different subjects and seeking meaningful connections between them. It acknowledges that real-life problems and challenges are rarely limited to a single area of knowledge, which is why integration of different disciplines should be promoted to address issues from broader and more complex perspectives (Suárez Mora, 2019). In this way, it stimulates critical thinking and the ability to solve complex problems in a holistic way (Parra, 2018).
- iv. **Project-based Learning:** the Model's approach moves away from memorization and focuses on the practical application of knowledge. An effective way to achieve this is through Project-based Learning (PBL), where students work on meaningful and challenging projects that require the use of skills and knowledge acquired in various areas. This methodology encourages creativity, collaborative work, and equips students with the ability to face real situations with concrete solutions.
- v. **Twenty-first Century Skills Development:** the Education Model aims to develop skills relevant to the current century, such as critical thinking, problem solving, collaboration, effective communication, creativity, and adaptability. They are known as skills of the future, necessary to face the challenges and opportunities of a world undergoing constant change and transformation.

Together, these pillars define a model that seeks to transform traditional education into a more enriching and meaningful experience for students, preparing them for a future in which adaptability and creativity will be fundamental competencies for achieving success and contributing to society. Undoubtedly, the educational landscape has evolved significantly, and with it there

have emerged innovative educational approaches that seek to transcend the limitations of traditional teaching methods. These new trends boast a number of distinctive characteristics that mark a clear difference as compared to the education models of the past.

This innovative educational approach is distinguished by its firm commitment to placing the student at the center of the learning process. By recognizing the uniqueness of each individual, the model promotes personalized learning aimed at meeting the needs and enhancing comprehensive development of each student. In contrast to the passive and rote lectures of the past, this new approach encourages active and practical learning, engaging students in interactive activities, experiments, and collaborative projects, thus nurturing their active participation and encouraging reflective critical thinking (Buendía, 2020).

Multidisciplinarity is another fundamental pillar of this approach. It seeks to connect concepts and knowledge from various disciplines to provide students with a more complete and holistic understanding of the world around them. In this way, they are prepared to address complex real-world challenges – therefore, the model promotes meaningful and contextualized learning. The integration of educational technology is an essential feature of this approach; it takes advantage of digital resources, interactive platforms, and educational applications to enrich the learning experience and offer broader and more diverse access to information and knowledge (Montoya Pineda, 2015). Finally, the innovative approach seeks to promote critical thinking and creativity in students. They are encouraged to ask questions, interrogate the current state of affairs, and seek creative and innovative solutions to the problems they face, thus fostering a curious and questioning mindset that allows them to be active citizens and contribute to social progress (Buendía Giribaldi, personal communication, 20 October 2021. Interview by E.G. Cabrejos Chilge on interpreting the educational quality of virtual teaching in higher level educational institutions).

Together, these distinctive characteristics of the innovative educational approach reflect a significant evolution in the way education is approached, focusing on developing skills, competencies, and meaningful and contextualized knowledge that prepares students to face the challenges and opportunities of the contemporary world. In order to promote exponential development and achieve a sustainable future with social responsibility with the use of the above education model, universities can combine it with specific strategies in terms of their social responsibility.

One of the main potential courses of action is the integration of sustainability into the academic curriculum. This implies incorporating the promotion of innovation, sustainable technology, circular economy, and social responsibility into study programs as key elements in all disciplines (Andia et al., 2021). In this way, students will be more prepared to face the environmental and social challenges of the future. Furthermore, it is important to promote research and sustainable development at university. Encouraging research centered on sustainable solutions and emerging technologies that address social

and environmental problems will contribute to generating knowledge and solutions for more responsible development.

To achieve a closer connection with society, universities can establish knowledge dissemination and community service programs. By forging connections with the local community, students and teachers will be able to work on projects that benefit society in general and address specific problems in a collaborative manner.

Social entrepreneurship and launching startups focused on sustainable solutions are also fundamental for sustainable exponential development. Supporting students and teachers who seek to develop projects with positive social and environmental impact will encourage the production of innovative ideas that benefit society (Medina et al., 2017). Universities should not focus solely on technical aspects – it is essential to incorporate educating in soft skills and responsible leadership in curricula. Critical thinking, empathy, collaboration, and leadership are fundamental skills to train professionals committed to sustainability and social responsibility. Likewise, it is important for universities to implement sustainable practices and policies in the daily operations of the campus. This includes proper waste management, efficient use of energy and resources, promotion of sustainable transportation, and raising awareness of the importance of sustainability among the university community.

To enhance their efforts, academic institutions can establish alliances with companies, non-governmental organizations, and government entities committed to sustainability and social responsibility. Working together will allow us to develop projects and programs that promote sustainable exponential development.

Ongoing education and dissemination of knowledge are equally crucial to raising awareness of the importance of sustainability in society. By offering continuing education programs and engaging in dissemination activities, universities can motivate more people to adopt responsible practices in their daily lives and thus contribute to a more sustainable future (Torres Coronas & Vidal Blasco, 2019). Finally, it is essential to measure and monitor the impact of the actions taken within the framework of University Social Responsibility (Ibarra et al., 2020). Establishing indicators and monitoring mechanisms makes it possible to evaluate the results and adjust the strategies according to the established objectives.

It is evident that by integrating sustainability and social responsibility into the education model, universities can play a fundamental role in educating professionals committed to sustainable exponential development and contribute significantly to a more responsible and prosperous future for all.

3.3. Connectivism: improving collaborative and environmental learning with AI

Connectivism is presented as a revolutionary educational perspective that adapts to the dynamics of today's digital society. Proposed by educator and researcher George Siemens, this learning theory is based on the idea that

knowledge resides in the connections and links that individuals establish on the Internet, rather than being constricted to an individual mind.

One of the fundamental principles of connectivism is the concept of “distributed knowledge”. According to this premise, knowledge is dispersed in the global network, and students may access it through various resources and connections (Torres Ortiz & Barnabé Corrêa, 2020). This decentralized vision of knowledge encourages a greater diversity of perspectives and improves the learning process, allowing topics to be approached from multiple points of view.

In the lens of connectivism, learning is conceived of as a process of navigation and exploration (Peña, 2020) where students become digital navigators who search, select, and evaluate information relevant to their interests and learning needs through the use of technology. The importance of connections is another central pillar in connectivism. As the theory has it, knowledge is acquired and expanded through meaningful interactions with other individuals, virtual communities, and various educational resources available online (García-Marco, 2011). These links are vital for the enrichment of learning, as they allow students to share ideas, discuss topics, solve problems, and work collaboratively, which strengthens the understanding and retention of information. Finally, another essential feature of connectivism is collaborative learning. By joining online learning communities, students actively participate in collaborative processes to share their knowledge, exchange experiences, and build solutions to common challenges (Solórzano & García, 2016). This collaborative approach reinforces the ability to work as a team and fosters a sense of community and cooperation in the educational process.

Connectivism offers an innovative and relevant approach to collaborative learning in today’s digital world. By recognizing the importance of connections, knowledge distribution, and collaboration, the theory teaches students to be critical and collaborative navigators in an increasingly interconnected environment (Bolívar & Dávila, 2016). By leveraging technology and collective intelligence, it is positioned as a powerful tool to drive meaningful learning and the development of skills relevant for living in the twenty-first-century society.

In the context of Latin America, a region that faces significant environmental challenges, connectivism may constitute a powerful tool to improve the understanding and addressing of these problems. It allows students to access a wide range of sources and perspectives on environmental problems in the region. Online platforms give them an opportunity to access research, reports, data, and accounts of personal experiences from various parts of the world, which enriches their understanding of the context and provides them with possible solutions.

The integration of artificial intelligence in connectivism opens new opportunities to tackle environmental challenges. AI can be used to analyze environmental data, identify patterns and trends, and predict environmental impacts. Technology helps obtain more accurate information and make more informed decisions in the protection of the environment. In addition, it contributes

to promoting environmental awareness in the region. Students can connect with experts, activists, and environmental organizations, which allows them to learn more about the problems and initiatives that seek to protect and preserve the local natural environment; this, in turn, enriches their worldview and encourages them to be active agents in the conservation of the environment around them.

Finally, connectivism is positioned as a promising educational approach to improve collaborative learning and help in addressing environmental problems in Latin America. By facilitating access to global information, encouraging cross-cultural collaboration, and giving students access to AI tools, this learning theory supports sustainability-oriented efforts and can empower students to become agents of change in environmental protection in the region. With deeper understanding of the local context and effective collaboration, Latin America can confront environmental challenges more effectively and sustainably.

3.4. The role of basic sciences in research for sustainability

Basic sciences play a crucial role in sustainability research, providing the foundations and essential knowledge to address environmental challenges in today's world. These scientific disciplines, which include physics, chemistry, biology, mathematics, and geology, among others, form the basis of scientific knowledge allowing us to understand the natural processes and systems that support life on Earth.

In the context of environmental research, basic sciences are of vital importance to understand natural phenomena that affect ecosystems and natural resources. For example, physics and chemistry are fundamental for understanding biogeochemical cycles, climate change processes, air and water pollution, and ecosystem dynamics (Camhaji, 2022). Biology, for its part, is essential in the study of biodiversity, interactions between species, and the impacts of human activities on natural systems. One of the main contributions of basic sciences to sustainability research is their ability to provide accurate and reliable data through measurements and experiments. Mathematics is an essential tool for modeling and simulating complex systems, which makes it possible to predict future scenarios and evaluate the consequences of different actions in the environment. As a whole, these scientific disciplines provide the theoretical foundation necessary to develop sustainable technologies and innovative solutions to environmental problems.

When it comes to scientific research in Latin America, basic sciences play a fundamental role in promoting sustainable development in the region. Through research in fields such as physics, chemistry, biology, mathematics, and geology, universities are making valuable efforts to address environmental challenges. For example, in the field of renewable energy, studies are being carried out with the aim of developing more efficient and sustainable technologies, such as advanced solar cells and energy storage systems. These studies

are crucial to drive a transition towards clean and environmentally friendly energy sources. Likewise, biology and ecology are essential disciplines for the conservation of biodiversity and the restoration of deteriorated ecosystems in the region. Through the study of endemic and endangered species, protection and restoration strategies have been implemented to preserve the biological wealth of the region.

The understanding of climate change and its impacts in Latin America has also been enriched thanks to research in basic sciences. Scientific studies have guided informed decisions on environmental management and adaptation to climate change, providing tools to face this global challenge. In addition, physics and chemistry have been of great importance to the development of clean technologies and more sustainable industrial processes in the region (Suárez, n.d.). These disciplines have allowed us to improve energy efficiency, reduce polluting emissions, and minimize the environmental impact of various industrial activities. The use of mathematics and statistics in the modeling of environmental systems has been another valuable contribution of basic sciences. The scientific lens has led to achieving better management of natural resources and greater environmental protection in Latin America.

As demonstrated above, basic sciences in Latin American universities are playing a crucial role in providing the knowledge and tools necessary to address environmental challenges. The research on renewable energy, biodiversity conservation, climate change, clean technologies, and modeling of environmental systems carried out in higher education institutions is vital to promoting sustainable development and contributes to the well-being of communities.

3.5. Opportunities for a sustainable future: social and environmental responsibility

Social and environmental responsibility plays a fundamental role in promoting a sustainable future in Latin America. The awareness of the natural surroundings and society and the commitment to protecting them are key in addressing the environmental and social challenges facing the region.

Social responsibility implies that companies and organizations act in an ethical and sustainable manner, considering the impact of their actions on society and the environment (Gallego Torres, 2017). In Latin America, there is a growing trend towards responsible business practices, where companies seek not only to generate economic gains, but also to contribute to the well-being of communities and care for the environment (Cajiga, 2023). This includes actions such as reducing polluting emissions, the responsible use of natural resources, and support for social projects that improve people's quality of life. Environmental responsibility, meanwhile, is essential for protecting the natural resources and ecosystems of the region. In Latin America, where biodiversity is exceptionally rich, it is crucial to encourage habitat conservation

and restoration practices, as well as to promote responsible use of renewable natural resources.

The Exponential Education Model offers valuable opportunities to mold responsible citizens committed to the environment in Latin America. This educational approach promotes teaching social and environmental responsibility from an early age, fostering awareness of the importance of caring for the natural environment and contributing positively to society.

Through the use of technology and digital resources, students gain access to relevant and up-to-date information on the environmental challenges facing the region. This allows them to understand the interconnection between human actions and the environment, developing a critical awareness of the impacts of their decisions and behaviors in their surroundings. In addition, the model promotes active and practical learning, allowing students to get involved in projects and activities related to social and environmental responsibility (Soto, 2011). Through real-world problem solving and collaboration with communities and organizations, students gain practical skills to address environmental and social challenges in the region.

The integration of social and environmental responsibility in the curriculum of the Exponential Education Model is essential to shape citizens committed to a sustainable future in Latin America. Through conscious education and active participation, students can contribute significantly to addressing environmental and social challenges in the region, driving positive change and building a prosperous future for all.

The education model inspired by exponential development seeks to achieve a sustainable future with social responsibility. However, its implementation may be complicated by various challenges that must be addressed to achieve the desired objective. One of the main challenges is unequal access to technology. In Latin America, there are significant disparities between urban and rural areas in terms of connectivity and access to digital resources. This hinders the effective implementation of the Exponential Education Model, since some students are deprived of online learning opportunities and cannot use technology in their education. Another important challenge is teacher training. To successfully adopt the exponential approach, teachers must be prepared to use innovative technology and methodologies in the classroom. However, the region offers limited opportunities for adequate training, which restricts the ability of educators to take full advantage of the education model's potential.

Curriculum adaptation is another crucial challenge. The transition from the traditional curriculum to the Exponential Education Model requires a thorough review and adaptation of content and teaching methods. This task demands a joint effort of educational institutions and education experts to ensure that the curriculum helps students develop the necessary skills and competencies. Likewise, the lack of adequate financing and resources is another obstacle to the effective implementation of the Exponential Education Model. It requires investments in educational technology, developing digital platforms,

and updating teaching resources. Without sufficient access to funding, many educational institutions may struggle to provide an enriching educational experience aligned with the exponential approach.

Promoting social awareness and commitment is also a key challenge. The Exponential Education Model must promote values of responsibility and sustainability to shape citizens committed to caring for the environment and social well-being. Likewise, inclusion and diversity are fundamental aspects that cannot be overlooked. The educational approach must be accessible and relevant to all students, regardless of their socioeconomic background or abilities, ensuring that no one is left behind in the learning process.

In addition to educational challenges, Latin America faces environmental problems that also require attention. The global and littoral phenomena triggered by El Niño are examples of extreme climate events that significantly impact the region. They can have serious consequences for agriculture, food security, infrastructure, health, and the economy of local communities. It is essential to study and monitor them to take adaptation and mitigation measures. In addition, climate change affects the region by causing extreme weather events, changes in precipitation patterns, and the rise of sea levels. Action needs to be taken urgently to protect vulnerable communities.

The loss of biodiversity is another cause for concern in the region. Although Latin America is rich in biodiversity, it faces loss of species and habitats due to deforestation and the expansion of human activities. Biodiversity conservation and sustainable practices are essential to protect natural resources. Other challenges, such as air and water pollution, social and economic inequality, unregulated urbanization, and lack of territorial planning, also demand attention to achieve sustainable development and a more just and inclusive society in the region.

3.6. Main practices of the Exponential Education Model and environmentalism

On the path towards a sustainable future in Latin America, it is essential to explore and apply the best practices that integrate the Exponential Education Model and environmentalism. These innovative steps not only empower students to address the region's environmental and social challenges but also provide them with a relevant and meaningful education.

An interdisciplinary approach, integrating multiple disciplines such as biology, physics, economics, and sociology, provides students with a holistic view of environmental and social challenges. Likewise, the promotion of active and practical learning through projects and field activities allows students to apply their knowledge in real-life situations and understand the relevance of their learning in their surroundings. Collaboration with the community, establishing contacts with local communities, NGOs, and companies enriches the educational process by giving students a chance to work on projects with

real impact. The use of educational technology facilitates access to updated information and digital resources on environmental and social issues, in addition to improving communication and collaboration between students and teachers. Finally, with the integration of social responsibility into the curriculum, students are motivated to contribute to collective well-being and care for the environment, which helps cultivate active awareness towards a more sustainable future.

In addition to the aforementioned practices, another key aspect in the integration of the Exponential Education Model and environmentalism is promoting the philosophy of sustainability among the entire education community. This implies not only the commitment of students, but also the constant training and skill improvement of teachers so that they can effectively impart knowledge and values related to sustainability. Likewise, it is essential that educational institutions establish policies and programs that support the implementation of eco-friendly practices in their daily operations, such as the efficient use of resources, reducing waste, and promoting environmentally friendly solutions. By creating an educational environment that actively promotes sustainability, the foundation is laid for students to become agents of change and leaders committed to a sustainable future for Latin America and the world.

4. Conclusion

It is imperative that educational institutions, governments, and society at large work together to promote the adoption of the Exponential Education Model and the efforts to protect the environment in Latin America. The interdisciplinary approach, active and practical learning, collaboration with the community, and the use of educational technology are fundamental premises which make it possible to prepare students for the environmental and social challenges of the future and empower them to face them.

Integrating social responsibility into the curriculum and promoting eco-friendly practices in educational institutions are crucial steps for cultivating active awareness of sustainability and encouraging the adoption of more responsible practices in society. We urge educational authorities to seriously consider the implementation of the Exponential Education Model as a strategy to improve the quality of education and to mold citizens committed to caring for the environment and protecting natural resources in the region.

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ABSTRACT

Challenges of exponential development in Latin America through the lens of an education model for a sustainable future with social responsibility

This article focuses on the challenges of exponential development in Latin America from the perspective of an educational model oriented towards a sustainable and socially responsible future. Through a detailed investigation that compiles various bibliographic sources and relevant documents, common patterns are identified among different authors. The objective is to integrate the Exponential Education Model with care for the environment and promoting sustainability and social responsibility in education by addressing the challenges in its implementation, identifying obstacles, and proposing solutions and strategies. In addition, the role of connectivism is identified as an outstanding tool to promote collaborative and environmental learning through the use of artificial intelligence. The crucial importance of basic sciences in environmental research is highlighted through concrete examples that demonstrate their contribution to sustainable development. In this context, a holistic vision is offered that emphasizes the potential of the discussed education model to shape responsible and committed citizens. Optimal practices are suggested to maximize its positive impact, promoting a more collaborative and effective education in search of an equitable and responsible society. We explore the influence which exponential development can have in the Latin American region, with a particular focus on the education model as a catalyst for a sustainable future with social responsibility. In this look towards what lies ahead, we propose to address the synergy between exponential development, basic sciences, and connectivism, with a firm commitment to the care of the environment.

Keywords: basic sciences, connectivism, challenges, Exponential Education Model

SOCIAL RESPONSIBILITY AND PURPOSES OF EDUCATION IN LIQUID MODERNITY

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1. Introduction

In *Liquid Modernity*, Zygmunt Bauman (2002) explores which attributes of capitalist society have proved long-lasting and which have changed over time. The author seeks to highlight the themes that were only peripheral in the early stages of building capitalism but have become central in the late phase of modernity. One of those features is the individualism that marks our relationships and makes them precarious, transitory, and volatile. Liquid modernity is a figure of change and transience. While solids are able to hold their shape and persist over time (in other words, they last), liquids do not have a defined shape and undergo constant transformations. The dissolution of “solids” into “liquids” in the current phase of culture manifests itself in deregulation, flexibility, or liberalization of the market. Bauman does not offer any definitive theories or systems but merely describes the contradictions of human beings and not only social but also existential tensions generated when we interact. Strangers irritate, repel, or embarrass us because, by their very presence, they overstep or blur the boundary lines defying the order of the world which “I” inhabits, and thus radically contradict the alleged mutual understanding that the “I” has with the “Other”.

Liquid modernity is a time without certainties. Its actors, who during the Enlightenment fought for civil liberties and departure from tradition, are now left with the obligation to be free. We are forced to design our lives as a project and performance. Beyond this – the project of our life – everything else is just a mirage. The flexible work culture makes the future grim, undermines the sense of pursuing a career or accumulating experience.

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For its part, the nuclear family has become a “pure relationship” where each “partner” may leave the other at the first difficulty. Love becomes fleeting, without liability to the other person, a faceless link on the Internet. Institutions are no longer anchors for the population. In a decaying welfare state, which has lost its collective stories giving meaning to history and to individual lives, we are surfing on the waves of a liquid society in a constant flux, uncertain and ever more unpredictable.

The growing uncertainty in which we live is reflected in the weakening of the security systems protecting the individual and in the renunciation of long-term planning; oblivion and emotional rootlessness are presented to us as a condition of success. This new (in)sensitivity requires flexibility, fragmentation, and compartmentalization of interests on the part of individuals, instructing them to always be willing to change tactics, to abandon commitments and loyalties. Zygmunt Bauman (2002) refers to the fear of long-term relationships and the fragility of the ties of solidarity that seem to rely solely on the profits they generate. He strives to demonstrate the pervasiveness of the commercial sphere by showing how relationships are measured in terms of the cost–benefit ratio in a strictly financial sense.

Bauman (2013) uses the provocative wording of “human waste” to refer to the unemployed (redundant), who today are considered “superfluous people, excluded offside”. Half a century ago, the unemployed were part of an “active reserve” waiting in the rear of the labor market for a chance to join it. Now, however, there is talk of surpluses, which means that people are superfluous, unnecessary, because the fewer workers, the better the economy works. For the economy, it would be best if the unemployed disappeared. When a person is a piece of “human waste”, they sign a pact with the devil, and physical decay and death are a looming certainty. It is better to disengage quickly, as feelings can lead to developing dependency. We must cultivate the art of truncated relationships, disconnect, anticipate failure – in short, we need to cancel contracts on time.

The “liquidity” of modernity – returning to the ideas of Bauman – refers to the end of the process of “embedding” individuals in “solid” structures with historically strong territorial roots, such as the system of industrial production or democratic institutions. Now, “[t]he secret of success is [...] to refrain from habitualizing to any particular bed” (Bauman & Tester, 2001, p. 90). Land ownership has gone from being a resource to being a liability because of its adverse effects on the rulers: it immobilizes them and links them to the endless and cumbersome responsibilities that inevitably come with the administration of a territory.

Humans are experiencing a constant but random succession of anxieties, making them question the efforts they make (if they make them at all). The only way to combat these irrational fears is to track their common roots.

In liquid modernity, knowledge holds value since it is expected to last, and education is only valuable to the extent that it helps gain lasting knowledge.

There is no pleasure in ingesting knowledge, hence liquid modernity envisions education as a product rather than a process. As a product, education is just another thing to be obtained. As a process, it is an ongoing activity spanning a lifetime, and it escapes categorization, much as industrial processes. Hence, the appetite for knowledge cannot ever be satiated.

As raised by Italo Calvino (1974) in *Invisible Cities*, wealth is not measured by what you buy, but by what you discard, hence knowledge is only seen as valuable if it can be used and disposed of instantly.

2. The notion of social responsibility

The word “responsibility” is defined as “the quality of being responsible (aware of one’s obligations)” in María Moliner’s (2007) *Diccionario del Uso del Español*. Its collocations include verbs such as “accept”, “assume”, “bear”, “admit”, “shirk”, “deny”, “demand”, “delegate”, “take on”, “fail to fulfil”, “have”, “feel”, “claim”, “consider”, “attribute”, or “place”. According to the same dictionary, the adjective “responsible” refers to “a person who is guilty of a certain thing, in charge of a certain thing for which they are responsible”.

Both “responsibility” and “responsible” derive from the word “respond”, which comes from the Latin *respondere*, where the root *spondere* means to pledge one’s future, to vow, or to promise for somebody. Naturally, the meaning and form of these words have since evolved.

From a moral point of view, responsibility can be understood as a person’s ability to recognize and accept the consequences of his or her actions. It may also be conceptualized as a management and decision-making method that meets or exceeds the ethical, legal, commercial, and social expectations that society has of companies.

Throughout history, the notion of social responsibility has had different nuances. For example, in ancient Greece, responsibility centered on the public sphere, and in the Middle Ages, it focused on beliefs. Later, in modernity, it came to be associated with reason, only for the contemporary era to consider it a feature of the market.

In this context, corporate social responsibility is conceptualized in various ways. For example, the Colombian Institute of Technical Standards and Certification (ICONTEC, from its Spanish acronym) defines it as a voluntary commitment taken by companies to meet the expectations in terms of integral human development agreed on with the contracting parties, and which, while remaining in line with legal provisions, allow organizations to ensure economic growth, social development, and ecological balance.

A. Carroll argues that social responsibility in business comprises the economic, legal, ethical, and philanthropic expectations that society has of companies at a given time. These responsibilities go above and beyond those imposed by law.

According to the so-called “green papers” published by the European Union, the goal of corporate social responsibility is to promote human development, which implies adopting a model of open corporate governance that reconciles the interests of various stakeholders in a global approach to quality and viability.

In light of the above, how can we define the role of universities?

If we want to talk about the social responsibility of universities, it is necessary to know what the relationship between society and university is. The latter is namely perceived as an ethical project whose identity needs to be constructed by society in cooperation with other stakeholders. What is it that legitimizes the university in the eyes of society? What is the way of existing and operating as a university in relation to the design of society (be it well or poorly formulated) in a given community, subjected to permanent changes in its environment? What are the ethics of universities?

Any discussion of the social responsibility of universities must be preceded by defining the conceptual framework of the human being, society, and university. Humans set out the shape of society, and the two further determine what the university is and what role it plays for knowledge. Social responsibility drives the activities of universities based on a profound concept of the human being (a person as an ethical subject) combined with the corporate values that derive from it (rather than any legislation or regulations). Consequently, they are able to fulfil their mission ever more effectively (while respecting their essence) through strategic objectives and programs aimed at building and supporting societal progress. University activities take place in a changing world which requires such facilities to constantly analyze and scrutinize it. In a globalized reality, universities need to be invariably oriented towards democracy, autonomy, freedom, and decentralization, and it is becoming increasingly evident that they should also contribute to minimal ethics and sustainable human development.

3. The purpose of the university

Every time universities are judged as to whether or not they fulfil their function in society, the discussion about what their ultimate obligations are becomes unavoidable. If we know the principal goal of universities, we can gauge whether they are deviating from the path to achieve them and consequently reorientate them. Since many contemporary voices argue that the theoretical concept of universities does not align with their actual activity and therefore they require restructuring, it is worth returning to the basics of this discussion, which, however traditional they may be, are still important, especially for those of us who are part of the university community. It is very common when approaching the subject to use various terms when alluding to the meaning of university, among them “mission” and “function”, which surely have different implications. However, rather than using the empirical

language of “function”, we would perhaps be better off assuming a teleological perspective and discussing the concept of university in terms of its purpose.

From this point of view, it is pertinent to indicate that the purpose of academia lies to a large extent in producing knowledge of all complex issues which require deliberation. However, if we limit the role of universities purely to producing or reproducing knowledge, we will arrive at an empirical purpose which is manifestly insufficient, given that humanity is something more than nature or pure factual reality; it also is an expression of freedom. Therefore, it is necessary to expand the purpose of universities beyond scientific activities and consider it in the context of values, ethics, and, ultimately, freedom.

If science is nothing more than the description of objects it interacts with and their casual explanation, then it is necessary to establish the meaning of the human actions which make use of the knowledge derived from science. This relationship between explanation and understanding must constitute the purpose of the university; it needs to undertake the construction or reconstruction of knowledge without neglecting the issue of how this knowledge is ultimately used.

This means that what gives purpose to the university is the domain of values, and therefore of freedom, as it is where human actions acquire meaning. To put it in a different way, the inquiry into the meaning of human actions presupposes free will, which makes it possible to speak of purpose as an objective.

Consequently, the purpose of university concerns culture, by which we understand the science, values, and manifestations originating from the field of aesthetics and creative expression.

The autonomy of the university lies in the fact that it obeys itself, that is to say that it imposes on itself its own law – this, of course, is not law in the legal sense, but rather ethical law which is independent from the reality of the empirical world. Following this ethical law, universities can venture out into society to act in accordance with their spirit. Therefore, what the university does or does not do is not rooted in normative practices which we usually call policies: academic policy, research policy, and so on. Because even if all these policies are codified and written down, a university may still fall short of being what it should be, and that happens when the actions of the academic community do not refer to the ethos which is consubstantial to them. In other words, a university is an abstract concept that is defined not only by its own material form but also by the content which its members refer to.

This is to say that the autonomy of the university is our own autonomy from which we intend to make sense of the university’s purpose. The dissociation between the duty that emanates from autonomy and our actual actions derives from the primacy of the world of contingencies. It makes us prioritize the hedonistic interest typical of bureaucrats, entrepreneurs, businessmen, and so on. This is not, however, the interest of those who have on their own accord chosen to see knowledge as the purpose of life.

It is what we insert into knowledge, into culture, that shapes this ethos, which in turn imbues the institution called university with its unique character. Academic ethos cannot be enforced by any empirical law if it does not already exist in the form of tradition or history.

The lack of ethos in the university community is the absence of a history of enlightenment. As a result, academia starts to consider professionalization as the principal goal of its activity instead of seeing it as a pursuit of meaning of life through knowledge.

This is precisely where the core lies of so many contradictions, misunderstandings, hostilities, and other manifestations that make it impossible to establish communication or a rational dialogue and that hamper the attempt to reconcile the ethos of a given community with the ethos of a university.

Autonomy as the intrinsic principle behind the institution of university is not something to be simply proclaimed, but something to be exercised. And from the point of view of university, exercising autonomy is not only a matter of managing a faculty or a school, it is a commitment for all people who are part of an autonomous knowledge-related community.

Consequently, a university should never be dependent on leadership, which is a concept used for explaining power relations, and therefore political in nature; rather, it should be dependent on the exercise of autonomy becoming the purpose of knowledge.

The emergence of universities in the absence of a period of enlightenment in our history made them limited, weak institutions unable to influence social life. Under the conditions dictated by the exterior reality and due to their defects, universities became, without major resistance, centers of political activity. As a result of this historical burden, we are still locally dealing with proposals of reorienting academic facilities, among others by demanding leadership. This is where it is important to emphasize that science, ethics, art, and culture in general – which is where the concept of university is rooted – are not matters of leadership, and seeing them as such is a rather nefarious idea. This is because leadership implies obedience, loyalty, by virtue of charisma, as meticulously described by Max Weber in his discussion of various forms of political power from the perspective of comprehensive sociology. Meanwhile, culture and science cannot be ruled by power relations but by rational adhesion to principles and theories by virtue of their consistency. In this respect, science and culture have been very disloyal, even to those who at a certain historical moment received the highest distinctions, because the concept of autonomy and freedom is antithetical to the concept of leadership, and it is precisely what marks the difference between a university and a political organization. Since universities renounce strict allegiances and are loyal only to what constitutes their foundation: *freedom*, they cannot be a host to political activities aimed at obtaining power. This is not to say that universities do not engage with the political reality, but rather that scholars refrain from doing politics when studying or trying to understand political facts, because doing so leads to

dogmatism that unfailingly culminates in *social domination*, as it has happened in the West and lately in Eastern Europe.

Therefore, what should give direction to the attempts of reforming education in line with the requirements of contemporary reality is a reflection taking place within the academic community and through a process of permanent communication. This reflection should be governed by the principles that constitute the foundation of what universities are: *knowledge, ethics, autonomy, and research*, and should derive from an aspiration to shape culture instead of disrupting internal dialogue, which inevitably results in fostering irrational thinking and indifference. The more we stray away from this spirit, the less able we are to achieve the purpose of universities expected of them by society – the purpose well illustrated by Wright Mills in what he dubbed the great promise of sociology.

All in all, the primary task of a university and its faculty is to restore, if there has been any, communication and dialogue in the academic community. Without achieving this, it makes no sense to take any other unrelated actions.

4. Research

Although the word “research” is deeply embedded in scholarly language, it has never quite described what today’s academia, society, and the state are laying claim to in a less ritualistic and more solemn tone. It is hardly understandable, since we are speaking of something that is novel and that has appeared relatively late for the model of university that has prevailed in society. After the 1940s, which saw a series of certain events of little importance or lasting impact, concern for the state of education started to grow again in the 1960s, culminating with the establishment of the Administrative Department of Science, Technology and Innovation or Colciencias (from its Spanish acronym) in 1968–1969. Later, in 1978, a number of universities from Bogotá and other Colombian cities assembled at a conference coordinated by the ESAP [High School of Public Administration] to take stock of the *State of Scientific Research in Colombia*. Lately, the advances in this field have been taken into account by Colciencias when setting out future prospects in its mission report.

The intellectual and scientific acclaim of the participants in these discussions, the depth of the reflections, and the decision to use them as a basis for the national policy on culture, science, and research triggered an unprecedented wave of concern and interest in university campuses around the country, enabling Colombian academia to gain new awareness of the fundamental role of universities. However, this re-awakened consciousness is inseparably underpinned by the long history of neglect and conditions making it impossible for universities to engage in research – the same research that today is proclaimed as the foundation of academia and the key to modernizing the country.

It is just one aspect which can be transformed through introducing changes in the structure of national higher education as a whole, in the processes of

faculty selection, the roles of professors, and the economic-social status of universities and academic curricula. It is a slow process that cannot aspire to replace an oral tradition with another, conveyed by written tradition and research. This is because knowledge and research offer a historical context constituted from within by a culture which sees inquiry into the world as a necessity and which considers social meaning the essence of life. However, if a university system yields to the demands for professionalization geared for social mobility, efficiency in the technical-business understanding, and growing competences for success in the labor market – such system cannot suddenly assume a role it has not been designed for.

Undoubtedly, it must be recognized that the lack of clarity in terms of the role of universities and the direction that they should follow – evident on the level of university management, graduate programs, schools, and faculty – has made it possible for reform plans to be guided by the current pulse of events. We have made an honest mistake, because in our vision of cultural and academic formation of the world in which society resides, we have never placed research at the heart of the model of university which we represent. There is no other explanation for the immediacy with which a research-oriented turn has been proclaimed in the recent years.

The challenge posed by the new educational policies, which have been drawn up by state agencies at the highest level, cannot be tackled with actions resulting from a hurried drive to meet the new criteria, without heed to the former state of affairs. Engaging in research in a historical vacuum poses a threat of producing mechanical, artificial answers without achieving substantive progress. The recent demand for research calls for prudence rather than euphoria.

What the above suggests is not to take an antinomian position, that is to say, to oppose any law that demands research by instating a higher education policy. The objectionable aspect of these new developments is that at the same time that the authorities make demands to intensify research, they announce funding cuts to universities and, consequently, compel them to self-finance under a model of sale appropriate for technical services. However, technical services such as consultancy are very different from research. Research does not guarantee immediate results in a defined time, as is expected of an economic investment. For this reason, research – due to its high costs – cannot be produced at universities that exist in conditions of poverty, and in the Latin American world, it has not been produced by universities alone, but rather with the aid of foundations.

In principle, universities must be open to the expectations for research, consulting, and outreach expressed by public and private institutions. However, the decision of whether to yield to them should not be motivated only by economic considerations, as those who lack financial resources tend to do, but should emerge from the intimate connection between the proposed subject and the academic curriculum; that is, the decision to take on a research

project will be determined by what insights the school may gain from its findings, according to the hierarchy of priorities in a certain discipline.

If we set our sights on the significance of the expected results of a research project, we renounce a monopolistic approach in which statistics is king – an approach that has always been used to evaluate university work and, in a certain way, has led universities and all of us to construct our lives in a way that complies with these terms.

In this sense, an important feature of outstanding universities is not that they have participated in 70% of the projects registered at Colciencias or at the respective vice-rectories, but rather that the projects which they did undertake have achieved, in some cases, extraordinary results.

In our case, seeing that we have quite a meagre experience, perhaps two or three projects per academic unit would be enough to receive the full support of the university to start a tradition in this field.

We cannot detach ourselves from the reflective and ethical spirit which, naturally, elucidates the merit of our studies, and instead decide *a priori* that any university research or consulting activities should be appropriate to and consistent with the obligations imposed on it or with what has been ruled by a rector, dean, director, etc. If we do so, then anyone can take the rein of a university and its faculty and exploit them in the service of the most insipid or the most sinister causes, as many cases in history have shown us.

No, it is the autonomy of a school and its research center – if it is even worth speaking of when one is incapable of understanding its meaning – which should dictate whether the external pressures are compatible with the interests of a discipline in search of knowledge.

If we do not draw a line and make sure that rationality based on values prevails over economic interest, then the institution of “university” will essentially be no different from a consulting firm. However, today’s universities are concerned not so much with what they should do but with what they have to do, which is dictated by the empirical world, or more precisely by the market. Following the demands of the present new liberal reality, the market has managed to invert the relationship between liberty and necessity into one conceptualized by Comte, for whom liberty represented an idea hostile to the order of necessity.

This way of thinking is very much in line with the latest developments in social sciences, in particular with those disciplines that have decided to abandon social philosophy and transform themselves into vehicles for social engineering. This process was anticipated by Bertrand Russell, who, immersed in the tradition of his time, eagerly awaited the day when there would emerge a mathematical formula describing human behavior as precisely as a mathematical formula can describe mechanics. In view of growing devaluation of humanities and the astounding rise of natural and technical sciences, perhaps it is pointless to speak of the formative role of universities, even as they become ever more deprived and impoverished in their struggle to retain a civilizing character in the rising sea of barbarism.

Just as the essential tool of an architect will not be aesthetic formation but the ability to design buildings which do not stand out but bring profit to the market, so will schools of economics get students to take the positions in which the market needs them. They will hopefully be very good economists from the technical point of view, but they will also be very dull.

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ABSTRACT

Social responsibility and purposes of education in liquid modernity

Liquid modernity, a term coined by Zygmunt Bauman, is a time without certainties, in constant flux. People no longer take pleasure from ingesting knowledge, hence liquid modernity envisions education as a product rather than a process. As a product, education is just another thing to be obtained. The authors of the article use Bauman's ideas as a springboard for discussing the current state of universities and higher education in Colombia, focusing in particular on the purpose which they should serve and the social responsibility they hold. They put special emphasis on research as the force which should be driving university activities in the times of liquidity.

Keywords: modernity, education, social responsibility

The monograph, divided into three major sections, discusses themes such as the transformations of urban spaces, dilemmas of economic globalisation, and social challenges of the modern age. The authors analyse the most relevant issues associated with regional and urban processes in Poland and non-European countries: the sustainable development model of cities and regions, eco-development, social and economic inequality between regions and within urbanised areas, the objectives and strategies of regional and urban planning. The book offers interesting insights not just to scholars, but also to practitioners interested in matters of urbanism, economy, and the social dimension of development.

This book contains 15 papers by renowned academic researchers from European and Latin American universities, presenting their experiences in the state of the art of urban environmental issues which in some way affect the good living of city inhabitants. I can only recommend that it be read in universities and higher education schools, because these experiences will help identify the successes and failures of the sustainable development strategies that we have been applying in each of our countries.

From the review by Hildegardo Córdova-Aguilar

The strength of the monograph lies in its international approach and wide array of research perspectives, which enrich the narrative and imbue it with a global character. The individual chapters display high academic quality and discuss key dilemmas of the modern world – from the protection of urban heritage and the importance of water for the economy down to the challenges of circular economy or the issues of spatial segregation. The publication is a significant contribution to the debate on the future of sustainable development and to the body of scholarly works on this very subject, as well as to the practical aspect of sustainable development. It offers a valuable source of inspiration for researchers, practitioners, and decision makers.

From the review by prof. dr hab. Marcin Wójcik