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AI IN LOCAL DEVELOPMENT: IMPROVING THE QUALITY OF LIFE AND ENSURING THE COMPETITIVENESS OF THE ECONOMY BASED ON INNOVATIVE TECHNICAL DEVELOPMENTS

Abstract. This paper outlines the uses of artificial intelligence in social and digital infrastructure, specifically in community development and stability. It informs the reader about the reasons behind inequality in urban planning, and how big data could be used to address these issues. Additionally, it highlights the current resistance towards artificial intelligence and highlights its potential applications in the future. Building the future of local economic growth and social inclusiveness in urban communities through artificial intelligence This paper argues that artificial intelligence (AI) can facilitate local economic growth and social inclusion by helping governments and community groups to focus on integrated efforts to identify the needs of marginalised communities. In a world where many cities are struggling with economic disparity, social exclusion and the imperative to become more sustainable, AI can help to enact the changes needed to improve the lives of residents. The focus here is on local community-led initiatives that utilise data in a strategic way, but also employ AI to optimise resource allocation and plan for a more inclusive future. Applications include AI platforms that connect residents with jobs, social services and educational opportunities based on community needs. The paper shows how strategic and targeted AI implementation focusing on community needs can strengthen urban networks, reduce social divisions and help to create a more resilient social fabric.

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ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В МЕСТНОМ РАЗВИТИИ: ПОВЫШЕНИЕ КАЧЕСТВА ЖИЗНИ И ОБЕСПЕЧЕНИЕ КОНКУРЕНТОСПОСОБНОСТИ ЭКОНОМИКИ НА ОСНОВЕ ИННОВАЦИОННЫХ ТЕХНИЧЕСКИХ РАЗРАБОТОК

Аннотация. В этой статье рассказывается об использовании искусственного интеллекта в социальной и иифровой инфраструктуре, в частности, для развития и стабильности сообществ. В ней читатель узнает о причинах неравенства в городском планировании и о том, как большие данные могут быть использованы для решения этих проблем. Кроме того, это подчеркивает нынешнее сопротивление искусственному интеллекту и его потенциальные применения в будущем. Построение будущего местного экономического роста и социальной интеграции в городских сообществах с помощью искусственного интеллекта В этом документе утверждается, что интеллект (ИИ) может способствовать искусственный местному экономическому росту и социальной интеграции, помогая правительствам и общественным группам сосредоточиться на комплексных усилиях по выявлению потребностей маргинализированных сообществ. В мире, где многие города борются с экономическим неравенством, социальной изоляцией и необходимостью стать более устойчивыми, ИИ может помочь внедрить изменения, необходимые для улучшения жизни жителей. Основное внимание здесь уделяется инициативам местных сообществ, которые стратегически используют данные, а также используют ИИ для оптимизации распределения ресурсов и планирования более инклюзивного будущего. Приложения включают в себя платформы искусственного интеллекта, которые предоставляют жителям рабочие места, социальные услуги и возможности получения образования в зависимости от потребностей сообщества. В статье показано, как стратегическое и целенаправленное внедрение искусственного интеллекта, ориентированное на потребности сообщества, может укрепить городские сети, уменьшить социальные разногласия и помочь создать более устойчивую социальную структуру.

Introduction Urban development has historically grappled with issues such as economic disparity, social exclusion, and unequal resource distribution. Traditional models often fall short in addressing the nuanced needs of local communities, leading to entrenched systemic inequalities. This paper builds on theories of regional and local development, emphasizing foundational contributions from scholars such as Friedman, Massey, and Coleman. By integrating these theoretical insights, the paper argues that AI can serve as a catalyst for change, fostering self-organization, community resilience, and participatory governance.

Objectives The primary objective of this paper is to explore how AI can facilitate local economic growth and social cohesion by:

- Supporting comprehensive, integrated efforts that respond to the needs of marginalized communities.
- Offering advanced tools for data-driven decision-making and participatory governance.
- Demonstrating how AI-driven self-organization can lay the groundwork for sustainable, community-led development.

We explore how AI's capabilities as a social transformation tool might

deepen community engagement and resilience. AI could be leveraged to foster "smart inclusiveness," where algorithms help identify and bridge social divides by dynamically analyzing community needs, tracking changes in social structures, and personalizing resources accordingly. For instance, AI-driven platforms could facilitate inclusive decision-making processes by analyzing local feedback, thereby amplifying the voices of marginalized groups within urban planning. Additionally, AI could support educational and social initiatives that empower communities with digital literacy, job skills, and socio-economic opportunities. By embracing AI as a mediator for equitable resource distribution and community-driven projects, cities can transform AI from a technological tool into a cornerstone of social equity and collaborative governance

Theoretical Background Theories of local development underscore the pivotal role of endogenous potential and community self-organization. Friedman's concept of "self-sustaining development"¹ proposes that local societies should leverage inherent social values and collective actions for transformative change. AI, when aligned with community-based initiatives, can amplify social capital, enabling a more robust participatory decisionmaking framework. Coleman's exploration of social capital² reinforces the notion that AI can enhance cooperative networks by fostering trust and facilitating efficient information dissemination.

Regional development models, such as Leontief's input-output analysis³ and Isard's interregional frameworks⁴, provide essential foundations for applying AI to optimize economic interactions and resource flows. The "Intermediate AI Community"⁵ model illustrates how AI can serve as a mediator, effectively connecting community aspirations with local governance, and creating a synergy between economic, social, and territorial elements.

In countries that have pure market economies, in which planning is viewed primarily as a tool for correcting market imperfections, regional development planning plays a minor role.

In mixed economies of the western-European type, regional development planning has traditionally been aimed at removing interregional

Land Use, Trade and Urban Structure Cambridge, Massachusetts: The MIT Press.

¹ David Henderson (2011) David Friedman on "Sustainability"- EconLog

² Coleman, James S. 1988. "Social Capital in the Creation of Human Capital." *The American Journal of Sociology* 94:S95.

³ Leontief, Wassily W. Input–Output Economics. 2nd ed., New York: Oxford University Press, 1986.

⁴ Isard, Walter. 1956. Location and Space-Economy: A General Theory Relating to Industrial Location, Market Areas,

⁵ See also , Leonidas Papakonstantinidis (2012) The Intermediate Community: A Behavioral/Bargaining Approach for Conflict Resolution at the Local - Bayesian Analysis BOOK OF PROCEEDINGS- EUROMED, 2012

discrepancies in income and employment opportunities. The regional planning framework has been welfare-oriented rather than efficiency-oriented.

Spatial Scope	Type of Model		Planning and Policy	
Interregional	Input/output, Spatial	equilibrium,	Multiregional plannin	g,
	Migration	-	Economic growth	-
Regional	Basic/nonbasic, Growth pole		Mathematical programming,	
	_		Spatial competition	
Intraregional	Urban land equilibrium, Tran	sportation	Land-use optim	mization,
	_	-	Accessibility	
Local	Endogenous factor models		Community-driven in	itiatives

Classification of Regional and Local Development Models

Some important developments in interregional or multiregional explanatory modeling will first be outlined. Following the original work of Leontief (1951) on national input-output modeling, Isard (1951) formulated the general interregional inputoutput model. This piece of work encouraged the development of techniques to overcome the computational difficulties inherent in these input-output methods; see, for example, Moses (1955)⁶ and Leontief and Strout (1963)⁷. However, although this model was formulated in the 1950s it has still not been widely applied.

In Russia (former USSR) rapid development of regional modeling began in the early 1960s in an attempt to aid the development of existing and recently established industrial regions. In the first stage, intersectoral relations for the country as a whole and for separate regions were modeled, and nationalregional models were developed for the main sectors. From the beginning, the main emphasis was on national intersectoral analysis 8 At the same time experience in modeling sectoral growth and location led to the generalization of existing methods for solving these problems by optimization techniques9. From the other side, Local Development models could be divided in two main categories through the time:

A. Those where the concept of local development is defined **as a particular form of regional development**, one in which endogenous factors

⁶Moses, L.M. (1955) The Stability of Interregional Trading Patterns and Input-Output Analysis. American Economic Review, 45, 803-832.

 ⁷W.Leontief and A.Strout (1963) Multiregional Input-Output Analysis- BOOK
⁸Treml, Vladimir G. (1964) ECONOMICS, USSR, METALLURGY, INDUSTRIAL PRODUCTION, INDUSTRIES, MANPOWER, LABOR, GOVERNMENT PROCUREMENT, METALS, BIBLIOGRAPHIES THE 1959 SOVIET INTERSECTORAL FLOW TABLE. VOLUME II. APPENDIXES A-F.

⁹Oksana Dmietrieva, O.G. Dmitrieva Oksana Dmitrieva (1996)Regional Development: The USSR and After Hardcover – April 1, 1996

occupy a central position¹⁰. (decades 60,70)

Those, where local development is defined independently from B regional development In these cases Local Development models are based on the belief that in order to effect change, a wide variety of community people should be involved in planning, implementation, and evaluation. Key themes include the use of democratic procedures, voluntary cooperation, self-help, the development of local leadership, and educational objectives¹¹. Locality development (also called community development) is a processoriented model that believes that the community should play a prominent role in order to effect change. In other words, it focuses on community building by engaging a wide range of individuals and groups from all areas of the community.¹². The turn-point was in 1979, after Friedmann-Weaver's "Territory and Function. The Evolution of Regional Planning" focused on local development as an ideology, as a turn point of local population to the prevailed ehos¹³ Finally, the win-win-win or community bargaining win model¹⁴ may be one of the approaches on this topic

Special focus is given to the local behavior within and during the bargain in the frame of the tripartite win-win-win perception, i.e [identity-social justice, community justice] with the Community in the Role of the "Intermediate", among bargainers. Social trust and social cohesion conditions (sensitization process) within the Community develop the necessity of building social capital at a local level. That presupposes that the local community builds up a "new local standard," based on local people's sensitized instant reflection behaviour. By its turn, sensitized behaviour must be considered in the frame of any "bargain", between two, taking place inside the Community. "Instrumental rationality" has been proved to be the main obstacle toward the socio-sensitized behaviour in the bargain process. Hence, a scientific

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¹⁰ Snickars, A. E. Andersson, and M. Albegov (1980) Regional development modeling - theory and practice - REGIONAL

DEVELOPMENT MODELING : THEORY AND PRACTICE- Vol 8

¹¹ <u>Fred M. Cox, John L. Erlich</u> Jack Rothman, John E. Tropman (1979) Strategies of Community Organization: A Book of Readings- F. E. Peacock Publishers; 3rd edition (January 1, 1979)

¹² William J. Coffey, Mario Polèse (1984)THE CONCEPT OF LOCAL DEVELOPMENT: A STAGES MODEL OF

ENDOGENOUS REGIONAL GROWTH Papers in Regional Science Volume 55, Issue 1, January 1984, Pages 1-12 ¹³John Friedmann, Clyde Weaver (1979) Territory and Function: The Evolution of Regional Planning-University of California Press, 1979 - Political Science

¹⁴ Leonidas Papakonstantinidis (2020) The Win-Win-Win Papakonstantinidis Model: An Approach between Empathy and Conflict Strategy. An Inquiry into the T. Schelling's —The Strategy of Conflict|| (1960) International Journal of Innovation and Economic Development

dialogue in the socio-philosophical level has been developed on how "instrumental rationality" should co-exist with the "sensitized behaviour" at local levels leading to a "society of citizens." Thus, the resulted behaviour leads into the absolute cooperation, which steps on the same rules of globalization15

AI in Addressing Urban Inequality AI possesses the capability to process and analyze vast and complex datasets, revealing insights that traditional urban planning methods may overlook. This ability is particularly valuable in identifying demographic shifts, economic disparities, and evolving social trends—all of which are critical for effective urban planning. AI-driven models can thus be employed to support regional development by optimizing resource allocation and enhancing community resilience. By prioritizing community-led initiatives, AI can bolster self-sufficiency, mitigate inequalities, and ensure a more balanced approach to growth.

Moreover, AI can facilitate the creation of predictive models that anticipate community needs based on historical data, enabling local governments and organizations to take preemptive action. Such data-driven insights empower urban planners to make informed decisions that reflect the realities of diverse community landscapes. By implementing AI in planning and resource distribution, communities can achieve equitable growth and reduce socioeconomic divides.

Community Engagement Through AI AI tools are uniquely positioned to amplify the voices of community members and promote collaborative problem-solving. Platforms with AI-driven feedback loops can collect realtime input from residents and provide local leaders with actionable insights that align with public sentiment. This reflects the principles of the "locality development" model, which emphasizes the importance of community participation in driving change. Through AI-enhanced platforms, transparency and trust can be fostered—essential components in overcoming resistance to technological adoption.

The "Intermediate AI Community" model plays a crucial role in demonstrating how AI can act as a bridge between residents and policymakers. By leveraging AI's ability to process large-scale community feedback and refine it into strategic recommendations, policy-makers can ensure that decision-making processes remain inclusive and representative of the community's collective needs.

Additionally, AI can be integrated into platforms that facilitate public discourse and consensus-building. Through natural language processing

¹⁵Leonidas A. Papakonstantinidis, 2022. "," <u>The Intermediate Community-2 A Behavioral / Bargaining Win-Win-Win-Win Papakonstantinidis Approach for Conflict Resolution and Acceptance at the Local Level</u>, Inovatus Services Ltd., vol. 8(4), pages 42-55, October.

(NLP) algorithms, community members can engage in meaningful discussions, express their concerns, and participate in co-creating solutions. This approach not only empowers residents but also strengthens the democratic process by ensuring that policy reflects grassroots input.

Methodology This paper follows a conceptual analysis approach, synthesizing existing theoretical models and exploring potential applications of AI in local development. This method aims to highlight AI's capacity as an enabler of community-led growth, self-organization, and strategic resource management. By referencing models such as the "local productive system" and the "win-win-win bargaining model," the analysis illustrates how AI can bridge the gap between community efforts and governance, leading to greater collective efficiency.

The methodology further considers case studies and past research that examine the role of AI in optimizing decision-making and community engagement. This exploration seeks to demonstrate AI's potential in enhancing urban infrastructure and aligning it with participatory governance models. The paper also discusses examples of how AI has been used to solve complex urban issues, such as traffic management, housing allocation, and social service delivery.

Analysis and Discussion Integrating AI into local development strategies has the potential to enhance economic and social resilience significantly. AI-driven platforms can match residents with job opportunities that suit their skills and needs, thereby promoting inclusive economic participation. These platforms can also optimize service delivery, ensuring that essential services reach underserved areas efficiently. The "local productive systems" model, which highlights the interactions between the economy, society, and territory, can be greatly enriched through AI technologies. By leveraging AI, local leaders can better coordinate projects that align with both current and future community needs.

AI can also facilitate educational access by providing tailored learning resources and platforms that support diverse learning styles. Educational institutions can use AI to create adaptive learning programs that cater to individual student needs, fostering a culture of continuous skill development and economic adaptability. By integrating AI into these areas, communities can build more dynamic and flexible economies that respond effectively to global market changes.

Historically, examples from the USSR's development of sectoral and regional models provide a valuable precedent for how technological tools can inform balanced economic strategies. In the early stages of regional modeling in Russia, intersectoral and national-regional approaches highlighted the importance of aligning resources with local economic strategies. These models laid the groundwork for how AI could now be applied to modern urban challenges, utilizing historical data and advanced computation to predict and manage regional growth.

Challenges and Ethical Considerations Despite its potential, AI adoption faces significant resistance, primarily due to concerns about data privacy, job displacement, and ethical considerations. Addressing these concerns is crucial for gaining community trust and ensuring the responsible use of AI. Transparent practices and inclusive policy frameworks must be developed in collaboration with local stakeholders to create a culture of accountability.

The role of ethical AI is particularly pertinent in community-focused projects. Self-organization models advocate for AI use that prioritizes the autonomy and well-being of community actors. AI systems should be designed with built-in ethical guidelines to prevent biases, safeguard data, and promote fairness. For instance, employing AI in a way that enhances data privacy through blockchain or other secure frameworks can alleviate concerns about surveillance and misuse.

Moreover, addressing job displacement requires forward-thinking policies that invest in workforce reskilling and education. By fostering a collaborative approach between AI experts, policymakers, and educational institutions, communities can prepare their workforce for the AI-driven economy. Such measures can transform perceived threats into opportunities, contributing to a more harmonious integration of AI into society.

Conclusion AI holds substantial potential to revolutionize urban communities by enhancing social cohesion and economic growth through community-led strategies. This paper advocates for a model in which AI facilitates self-organization, aligning with local values and fostering sustainable development. The "win-win-win" community model reinforces the idea that AI should not only serve governmental or business interests but also prioritize community empowerment. To fully realize AI's benefits, future discourse should focus on developing policy guidelines that ensure ethical AI use and promote collaboration between technologists and community leaders.

Recommendations for Future Work Future research should delve into practical case studies that document AI integration in community-led projects, emphasizing the long-term social and economic impacts. Policymakers should collaborate closely with AI specialists and community leaders to design regulations that foster innovation while safeguarding community interests. Moreover, expanding the practical applications of the "Intermediate AI Community" model and analyzing its real-world implications can provide deeper insights into fostering resilient, selfsustaining urban development through technology. Further work should also explore how AI can bridge digital divides by making technology more accessible and adaptable to different socioeconomic contexts.

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СОТРУДНИЧЕСТВО РОССИИ И БЕЛАРУСИ В ОБЛАСТИ ОБРАЗОВАНИЯ: БОЛЬШЕ, ЧЕМ ПОЛИТИКА?

Аннотация. Рассмотрены политико-правовые основания современного сотрудничества России и Беларуси в области образования и науки. Обозначены основные проблемы и противоречия, возникающие в настоящее время в этом сотрудничестве.

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COOPERATION BETWEEN RUSSIA AND BELARUS IN THE FIELD OF EDUCATION: MORE THAN POLITICS?

Abstract. The political and legal foundations of modern cooperation between Russia and Belarus in the field of education and science are considered. The main problems and contradictions currently arising in this cooperation are outlined.

После распада Советского Союза (и Россия, и Беларусь были и