

Smart Governance and Data-Driven Employment Policies in Less Developed Regions: A Regional Governance Model from the Banská Bystrica Case

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Abstract. This paper explores how smart governance and data-driven approaches are relevant to labour market issues in less developed regions. Over the last few years, the definition of smart cities has progressed from a purely technology-based lens to an evolving model of smart cities centered on governance, institutional cooperation, and data-infused decision-making. However, empirical evidence remains sparse regarding these techniques in structurally underprivileged and peripheral contexts. The study concentrates on the Banská Bystrica Region in Slovakia, a typical example of a less developed European region experiencing a period of long-term unemployment, demographic decline, and regional differences. Based on a qualitative case study methodology, the study reviews employment support measures by the Regional Development Agency in a time span ranging from 2018 to 2024. The analysis is informed by institutional data, program evidence, as well as theoretical principles on smart governance and data-driven policymaking. The study examines policies targeting young people in NEET situations. Our research confirms that data-driven, coordination, and context-dependent governance interventions can, to a certain extent, produce better design and delivery of employment policy. Personalised services, geographical reach and close monitoring appeared to be more important factors for effective policies. This study adds to the literature by applying the concept of smart governance beyond urbanization, and by examining the phenomenon empirically from a less developed context. Further, it offers a theoretical framework of Smart Regional Employment Governance that could be useful for a further study in policy making on the issue. Together, it can be maintained that effective employment policy does not rest solely on technological instruments, but is also contingent upon governance capacity and institutional learning.

Keywords: Smart Governance · Smart Regions · Employment Policy · NEET · Data-driven Governance · Regional Development

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1 Introduction

The European Union has long resisted significant regional differences. Some areas are not as advanced as others and have problems that have been going on for a long time, not enough jobs, not enough people living there and not enough new ideas. In Central and Eastern Europe you see these issues especially where there is difficulty getting people to work and where the population is shrinking [11]. This makes it difficult for these areas to catch up with the EU, with its many regional economies and its diverse, but all-weather regions [5].

Smart governance represents a promising approach in this regard. Instead of addressing only technological solutions, it also emphasizes inter-agency coordination, data-driven governance, and adaptive policy mechanisms [1, 6, 10].

In our research aims to understand what smart governance will mean for regional employment policies. Secondly, it considers real cases of job creation programs in the Banská Bystrica Region to understand what works. Third, it devises a plan for other similar regions to enhance their policies relating to employment.

2 Theoretical Background

2.1 From Smart Cities to Smart Governance

Over the past 10 years, the concept of smart cities has undergone major changes [2]. Initially it was about technology and computers for cities to become smart [4]. They believed data platforms, sensors and digital networks were the secret to smarter cities.

But some people feel that just thinking about the technology doesn't cut it. These are officials who say it does not take into account how governments operate and the social aspect. Others have suggested that focusing solely on the technology side overlooks how messy things get in public administration and the role that good institutional arrangements play in public administration.

So some of the more recent research is starting to look at smart development as a wider scope, and governance is vital to that. That requires an inquiry into how governments and institutions work together to move smart development forward – rather than simply relying on technology to "do" everything.

2.2 Data-Driven Governance

Data-driven governance has become a key element of modern public administration, referring to the systematic use of data across the policy cycle, including problem identification, policy design [14, 15, 19], implementation, and evaluation. Our research shows that access to real-time data, analytical tools, and monitoring systems enables policymakers to better understand socio-economic dynamics and allocate resources more effectively. This is particularly relevant in employment policy, where granular data allows for the identification of target groups and the design of tailored interventions.

At the same time, our findings highlight that effective data use depends on data quality, system interoperability, and responsible data governance. Strong institutional frameworks and regulatory mechanisms are essential to ensure trust, accountability, and the ethical use of data.

2.3 Employment Policy and NEET Concept

The NEET category is made up of young people not being in school, who do not have employment, and who do not receive any kind of training [8, 9]. In our research we found that leveraging data and smart governance let us make smart decisions on how to support them to shape policies that work.

NEET is very heterogeneous in terms of diversity, composed of a diverse population of learners from various levels of education, competences and social status. Some may be confronted with institutional obstacles, for example, lack of educational qualifications, some may be deprived of socialisation or few are excluded or not as fortunate to have the opportunity to get a job. Given this heterogeneity, standardised policy solutions may not reflect the heterogeneity. Personalised and flexible solutions, adapted to individual needs, are important to effective interventions. This encompasses individual counselling, training programmes, and support services to address labour market integration.

These features strongly remind us of the concepts behind smart governance. The more you use data, the better idea you can achieve about who you are trying to reach audience. And together, when different organisations collaborate, they can make a difference and support more people.

2.4 Smart Governance in Regional Contexts

The vast majority of knowledge about smart governance in local context is focused on urban settings, although it also become a fact that governance innovation is as important in regional and rural contexts. Less developed areas often struggle with structural disadvantages, such as reduced institutional capacity, slower economic diversification, and restricted access to facilities.

Smart governance in a regional context can therefore be comprehended as a local-level, place-specific and location-focused solution. Knowledge of local conditions – economic architecture, demographic patterns, institutional configurations – is crucial. Territorial accessibility-wise, it is equally important that one is mindful of access to services is a significant challenge in regions with dispersed populations and fragile infrastructure. Decentralised service delivery and local engagement are thus necessary elements of good governance [12, 13].

Its practical, therefore, broadening of smart governance into regional settings has brought a major conceptual and practical departure between theory and practice on a new wave of smart governance to both theory and, in some ways, actual application. It underlines the fact that governance innovation is not unique to technologically advanced cities, but it is as important to the challenges faced in frontier developing areas of governance.

2.5 Governance, Digitalisation and Labour Market Transformation

Governance and digital transformation are reshaping labour market policies and require a more forward-looking and dynamic approach. Conventional policy instruments often respond to problems only after they emerge, which is insufficient in the context of rapid

technological change. Our research suggests that public institutions must anticipate labour market developments, identify emerging risks, and respond more flexibly.

In this context, smart governance plays a crucial role by integrating digital tools, coordinating institutional actors, and supporting evidence-based decision-making. Policymakers [7, 22] can develop more effective interventions by using employment data, monitoring systems, and analytical tools, particularly in regions where labour market challenges are linked to skills mismatches and weak cooperation between public institutions and industry.

Our findings also highlight that digital transformation is not only a technical process but a governance challenge. Its success depends on the ability of institutions to coordinate actors, manage data responsibly, and ensure that digital tools reduce rather than reinforce inequalities. At the same time, labour market changes driven by automation and digitalisation increase the demand for adaptable, analytically skilled workers.

Recent developments associated with Industry 4.0 and artificial intelligence further intensify the transformation of labour markets and governance systems. Automation, predictive analytics, machine learning, and digital platforms increasingly influence both employment structures and public policy implementation. In this context, smart governance requires not only digital infrastructure, but also institutional capacities capable of integrating AI-supported decision-making, labour market forecasting, and adaptive policy coordination. These developments are particularly relevant for less developed regions, where technological transformation may simultaneously generate new opportunities and deepen existing socio-economic inequalities if governance systems remain insufficiently adaptive [3, 20].

Overall, these trends reinforce the need for governance systems that can effectively use data, coordinate across policy domains, and adapt interventions to changing conditions, thereby extending the concept of smart governance beyond technological solutions.

3 Methodology

This study employs a qualitative case study approach to examine the implementation of smart governance principles in regional employment policy. The objective is not to test causal relationships, but to understand institutional processes, governance dynamics, and policy implementation mechanisms.

The Banská Bystrica Region was selected as a case study because it is a less developed area in Europe which in a way still presents challenges in the labour market, yet also tries ways to prove a novel and creative form of governing within it. The region represents a particularly relevant case due to its long-term structural unemployment, demographic decline, territorial disparities, and relatively weak economic performance within the Slovak and EU context. At the same time, the region has implemented innovative governance initiatives focused on employment support and institutional coordination, making it suitable for examining the application of smart governance principles in less developed regions. We can understand all of the complexity within the interaction of institutions, policies and governance processes between them when studying this region so we can comprehend their implication towards regional growth.

Three questions shape the research:

1. How are smart governance principles applied in regional employment policy?
2. What role does data-driven governance play in shaping employment interventions?
3. Which governance mechanisms contribute to improved labour market outcomes in less developed regions?

This means that these questions contribute to the research by representing both theoretical and practical dimensions and offer insights into the governance process in the context of the broader findings of the study.

3.1 Research Design

The research is exploratory qualitative by nature. This is particularly useful in the study of complex governance systems, where multiple actors, institutions, and policy domains co-mingle. This study is concerned with governance structures rather than causal relationships.

The case study approach will allow an in-depth analysis of a specific regional context. It allows the scholar to analyse not just policy outcomes, but also the means for achieving them. I.e., the way in which institutions coordinate, how decisions are made, how policy interventions are implemented (e.g., in case of a pandemic or crisis).

The Banská Bystrica Region is a good example of a city where there are big problems, but they are using new and innovative solutions. Long-running unemployment, a declining population and some areas that aren't doing as well as others are taking a toll in this region. But the principals of an institution like this have put in immense effort to devise original solutions, relying on data and banding together to implement them. The Regional Development Agency (RABBSK) has been a leading player in this direction, trying innovative methods to grow and flourish the region.

The study's guiding research questions are as follows:

RQ1: How are smart governance principles operationalised in regional employment policy?

RQ2: What role does data-driven governance play in shaping employment interventions?

RQ3: Which governance mechanisms contribute to improved labour market outcomes in less developed regions?

As a result this balance of elements makes the region an excellent setting in which to examine how smart governance may operate in less-developed settings.

3.2 Data Sources and Analytical Approach

The study draws on multiple data sources to ensure analytical depth and contextual understanding. The following sources of data support such research:

- institutional reports and programme documentation,
- administrative data related to employment interventions,
- secondary statistical data,
- implementation insights derived from RABBSK activities (2018–2024) [18].

Our analysis confirms that this triangulation increases reliability. The empirical material was analysed using qualitative thematic analysis and institutional policy analysis. The analytical process focused on identifying governance mechanisms, patterns of institutional coordination, and the role of data-driven decision-making in employment interventions. The analysis also examined how governance structures influenced programme implementation and labour market outcomes. By comparing different types of evidence, the research reduces the risk that a single data source will bias findings. Methodological triangulation was used to improve the validity and reliability of the findings. Combining institutional reports, administrative data, secondary statistical sources, and implementation evidence enabled a more comprehensive interpretation of governance processes and policy outcomes.

In addition, the methods for data analysis are both objective and interpretative as well. First, the study examines the outcomes of these programs and those who have taken part in them to try and understand how large they are and what they do. Then it looks at how the programs are managed – how data is organized, how different people collaborate, how services are provided – to study how everything plays out in actual day-to-day life.

The analysis does not seek to prove one thing is directly a driver of another. Rather, it searches for links and attempts to understand what's at the core. This method was similar to how qualitative research does what it does. It is more about having a better understanding of complex stuff that needs to take place than coming up with figures which can be used to study much of the different situations.

A special emphasis is placed on the intersection of data-driven processes with governing institutions. This includes looking at how data is employed in decision-making, how institutions organize their activities, or the kinds of services they offer to a certain group of people.

3.3 Limitations of the Research Design

Though the research design is strong in some ways, there also exist some limitations that need to be mentioned for it to be considered. This study refers to information that already exists, such as reports from organisations. This data could be incredibly useful, but is probably not an exhaustive picture of the whole. The organisations that provide such information may not have similar means to gather and report it, which can lead to biases. If a project runs in the organisation, in its own interests, there can be influencing data that is obtained from program participants; and these can affect the results.

There is also a lack of original data collection for a second effect. The same study does not collect information with participants or other members of government or organisations engaged in providing services. Such qualitative information may facilitate better understanding of user experiences, challenges and perceived effectiveness of interventions.

Drawbacks to the case study method include the limitations in their ability to generalize the findings to other contexts. Since Banská Bystrica Region has unique socioeconomic and institutional conditions, the results are really specific to the context of the Banská Bystrica Region. This isn't trying to make sweeping statistical generalizations,

but to identify trends that might also play out in comparable areas, which is useful by its own standards.

Then there is the one problem of counterfactual analysis. It is not possible to ascertain with certainty if the observed results are directly due to the interventions assessed in this study or due to other exogenous factors. In addition, the absence of systematic longitudinal tracking limits the ability to evaluate the long-term sustainability of employment and educational outcomes among programme participants. Accordingly, the discovery should not be assumed to be definite.

Even if the study took place between 2018 and 2024, its scope is likely too brief to indicate the full reach of policy impacts. That's especially the case for things like employment outcomes, that can take an amount of time to manifest – particularly for the already vulnerable, people who are not in education, employment or training at all.

The more research there is that follows those trends over a longer time frame, the better to understand what is happening. Long-term monitoring would provide a better understanding of which interventions are effective and sustainable over time. Despite these limitations, the qualitative case study approach provides valuable contextual insights into governance dynamics that would be difficult to capture through purely quantitative methods.

3.4 Methodological Reflection

Given the broader context the approach we take to this challenge shows how complex governance research can be. Smart governance is not some kind of easy simple thing we can measure - it is all more or less a complex concept involving a lot of different parts and parts, institutions, processes, and how they all interact with each other.

Using this complexity in qualitative case study approach, the complexity can be captured by our qualitative case study research approach through use of real practices and institutional dynamics. It offers insight into how governance systems work, how policies are enacted, and how various players communicate.

But there's a reason how we do this should be scrutinized. It is not so much about providing some easy-to-follow answers as it is making us understand what is going on, so that we can act on what we know, so we make the right decisions.

It is because the methodology has implications for the overall aim of the paper as an exercise not to analyse one case and at the same time contribute to a new conceptualisation of smart governance in regional contexts.

4 Empirical Analysis

4.1 RABBSK as a Smart Governance Actor

RABBSK is part of various institutions working in the region, and acts as a central intermediary between regional governments across the spectrum of employment policy interventions. Instead of a conventional form of administrative authority, RABBSK is a hybrid governance actor which integrates both policy coordination, service integration, and data-driven decision-making. From this standpoint, the role played by RABBSK

has been interpreted along three interrelated dimensions. It enables multi-level governance by linking regional authorities, municipalities, national institutions, and local stakeholders. This coordination role is most important in less developed regions since the fragmentation of institutions sometimes limits the successful implementation of policy measures.

The organisation is now using data to inform its decisions. It's pulling information from a lot of different sources, such as administrative data, oversight and monitoring systems, and using that to assess its programs. This provides the organisation with the right information to make decisions, and adapt the decisions accordingly. It's a departure from tried-and-true, one-size-fits-all policies to a flexible, evidence-based method of governance. Utilizing that kind of data gives the organisation both the tools to adapt more quickly to changing circumstances and to ensure that the responses it's implementing actually make a difference. In addition, this continuous improvement of life-learning and learning enhances what the organisation aims to achieve. In so doing, the organisation is able to be dynamic and flexible and the process of decision is easier in making a better informed and effective decision.

A central role of RABBSK is that of the "boundary spanning" actor. Its interaction with multiple levels of institutions and stakeholders fosters cross-knowledge sharing and promotes teamwork. This is especially important in remote areas where institutional-target relationship gaps inhibit policy efficacy.

4.2 Employment Support Programs

RABBSK operates various employment support programmes to address structural labour market problems that impact young people living in NEET contexts. These programs, which move away from policy instruments to tailor-make, integrative, and territorially embedded, focus on personalisation and integrative measures rather than tools of policy.

One of the essential characteristic features of the programme is the focus on person-centred support. Personal counselling sessions offer opportunities to recognize individual barriers that participants, such as skill gaps, lack of work experience, or social limitations, may encounter specifically. From this evaluation, we develop tailored support routes (including training programmes, placement support, job placement and educational reintegration) according to a person's needs.

Territorial access is also an important aspect. To serve the people, services are provided through a range of local contacts and activities to help ensure that care exists for those who live in remote or disadvantaged areas. This decentralised approach reduces spatial inequities and fosters inclusivity of policy intervention.

Also there is some outreach/engagement in the programme. Because many potential recipients of NEET are not registered with employment service, active strategies are often necessary to reach NEET people. The programme engages hard-to-reach groups as it undertakes targeted outreach programmes, working with local organisations and community actors.

Accordingly, the program also is an important avenue for establishing trust between organisations and the communities they serve. By providing readily available services, it promotes awareness of and connection to the needs of people. This is particularly crucial for vulnerable communities who find such assistance difficult to find with institutions.

4.3 Results

We found that around 900 people who weren't working or in school were able to get involved, which shows that outreach programs can actually work. Usually, these programs are seen as a big obstacle in employment policies. However, the fact that not many people completed their requalification training suggests that we need to improve the way we help people develop new skills and provide long-term training. This is really important for helping people get back into the workforce. By strengthening these training pathways, we can make a bigger impact and help more people achieve their goals.

The facts and figures clearly show how well these interventions are working and the impact they have:

- more than 5400 clients participated
- approximately 900 NEET individuals were engaged
- outcomes include:
- around 100 individuals entering employment
- nearly 20 returning to education
- 16 completing requalification programs [24]

Although long-term monitoring data remain limited, preliminary programme evaluations indicate that participants who completed requalification activities demonstrated improved labour market readiness and stronger engagement with employment support services. Similarly, individuals returning to education showed higher levels of continued participation in educational pathways, suggesting positive effects on social and labour market reintegration.

The findings suggest that programme effectiveness should not be evaluated exclusively through immediate employment outcomes. In the context of vulnerable NEET populations, intermediate outcomes such as educational reintegration, skills acquisition, institutional engagement, and increased employability also represent important indicators of policy success.

4.4 Interpretation

Our findings indicate that several key mechanisms explain the effectiveness of the interventions:

1. Personalization – tailored services address individual barriers
2. Territorial accessibility – local centres reduce spatial inequalities
3. Service integration – combining employment, education, and social support
4. Data-driven adaptation – continuous monitoring improves policy effectiveness.

These mechanisms should be understood not just as independent elements. Instead, they are elements from a set of holistic governance mechanisms. Their efficacy relies on their simultaneous enactment and reinforcement. For example, personalised services are far more effective when supported by good data available to us and service delivery structures in the market.

The empirical findings indicate that governance interventions may generate broader social and institutional effects beyond direct labour market integration. Improved engagement with public institutions, increased participation in educational activities, and

strengthened individual employability capacities represent important indirect outcomes, particularly in structurally disadvantaged regions.

4.5 Governance Processes and Implementation Dynamics

On a larger scale, it's not only numbers and results. We want to know not only what decisions are created, but how decisions. Our analysis shows us that a good plan isn't enough; it's equally critical to evaluate how effectively that plan is actually executed and how the different aspects connect to each other. It's an essential factor and can make all the difference in why the program actually works.

Inter-institutional coordination represents a critical prerequisite for effective policy implementation. Coordination becomes increasingly complex when multiple actors, including municipalities, employment offices, educational institutions, and non-governmental organisations, are involved in policy implementation. All of them have to coordinate their work so that they're helping each other out rather than duplicating work or stopping in each other's path. That is important because it helps ensure that people receive the services that are needed, so that none of the various services we have out there completely overlap. These groups will put their respective strengths pooling for a more efficient and serviceable system for everyone.

But as you go you have to modify a programme – that is incredibly important. In this way, you are able to tailor the services to address some of the contextual needs of your local area and the persons that you serve. By doing so, your interventions become more likely to be effective.

To achieve this, continuous data collection and feedback mechanisms are essential. If something in the code changes that will be able to guide the programme in a more and better direction, to give the program a direction that will only improve with the passing of time.

Frontline workers and service providers are also key. Their interactions with clients influence the availability and perceived relevance of services. It is equally important we gain the trust and interest of our members so that they want to participate, particularly among our most vulnerable.

It's simple: you have to learn from your experiences. As time passes, knowledge and experience allow programmes to be improved. But this learning process is aided by systems that track progress and make use of data to assess what works and what does not.

These systems provide the data needed to inform changes and enhancements of the interventions. There's data to make decisions based on and improving upon the data over time refining and refining existing programmes. This is vital in this regard and if you are going to demonstrate that what's been done is working.

5 Discussion

Our results back the idea that governments are now doing the decision-making with data and good governance. This is a step in a general evolution in the ways in which public administration operates, in which it emphasizes creating strong institutions, coordinating

efforts and developing flexible policies instead of just a technological phenomenon. Doing so helps them formulate more relevant and improved policies for the citizens. What matters is not only technology but also the quality of governance system that matters most for 'smart' governance to work well.

For example in Banská Bystrica Region the benefits of improved employment outcomes are strongly contextualized by the inter-organisational ties, institutions and the level of integration of services – the time taken to adjust policies. It indicates that effective governance is required to achieve digital transformation make effective contributions to the public sector, as many experts have claimed. In short, it is not just the right technology but the system and process must also work well together to do everything in technology effectively. This suggests that governments should establish strong governance frameworks before implementing new digital solutions. In this way they can create an environment of opportunity for digital things really to go a long way and make their way into people's day-to-day lives.

Our results also show the role of territorial embeddedness. This is particularly important for regional peripheral areas. Unlike metropolitan areas, where labour markets and institutional networks are abundant and diversified, less developed areas are weighed down by social and structural constraints that govern access, infrastructure and demographic decline. Decentralised provision of services through local contact points removes massive spatial barriers and policy interventions became even more inclusive. This would suggest that we still need close – in the digital era of politics – nourishing physical proximity and local stake in the process.

It is also important to think about how it affects the potential availability or chance for everyone to have an equal shot at economic advancement, opportunity to growth and labour market participation. By linking jobs, education and social services, we are doing a holistic job of providing help for those who are struggling to get jobs. And yet this is exactly what the OECD found as well, that we have to work together across industries to ensure equal opportunity for all to prosper [16]. But there are still huge regional disparities, suggesting that some regions haven't developed as rapidly as others. This is the result of larger shortcomings in the way in which our systems and institutions work – and this may cause regional differences in opportunity.

However, when we turn our gaze down and zoom out to governance, you can very effectively tell that organisations such as RABBSK play an important part. We identified that serve in the area where the various levels of government and policy are working, organizing things, exchanging knowledge, moving things along. The thing is their ability to cover the gaps between institutions, especially in developing and under-resourced areas. One such means of doing so, however, is to invest in, and strengthen the capacity of these intermediary organisations as they exist in regional development, in order to facilitate more effective regional development projects. Doing so, we can develop a much more unified and effective system where different tiers of government and policy areas interact smoothly with one other as one. This can result in more beneficial outcomes for the people and community. This emphasizes the need for participatory, collaborative forms of governance that have emerged as critical to the development of smart governance systems [17].

It's based on results, which are what it is, evidence that data is key to today's systems of government. By actively monitoring and receiving feedback, policymakers make their plans so that as things change and they are able to operate much more efficiently. And that also brings with it some significant challenges, particularly in terms of whether the data is robust, can be brought into play with other systems, and is used fairly. So, it is extremely important policymakers to ensure that the use of data in decision making is open and responsive and involves everyone. The increasing integration of AI-based analytical systems into public administration also raises new governance challenges related to transparency, accountability, algorithmic bias, and digital inclusion. That means they should be careful about collecting, using and sharing data, too, and how to make sure not only that a few individuals make decisions, but that all voices matter. If done so they can ensure that data-driven governance is equitable, reliable and working for all [23].

What is necessary to consider further is the level of application of the model in different contexts and places. Our results aren't necessarily specific to a given area, but mechanisms by which those systems govern themselves, such as merging things, personalizing them, or using data to adjust, aren't just for that area, and could work in other areas that aren't as developed. However, making these models work involves a lot of factors. The way decision-makers make choices as well as the level of funding, such as how well the region can manage new systems? Not all places will be ready to implement these kind of integrated systems, which could lead to problems for these individuals – some likely won't have the infrastructure and systems in place to enable those systems to work – and people need to be helped in building their capacity and receiving the right support for them in doing so. That's especially true for areas with less effective administrativeness, where implementing new systems can be an uphill battle.

Moreover, a rise in digital technologies raises questions about digital inclusion and accessibility. To make sure that vulnerable members of societies are not excluded from digitalised services has been a major challenge, mainly in rural and disadvantaged contexts of remote areas. Good governance is less about making things better now, better now with plans for the future, and more about making things better after all. That includes systems which can evolve and learn with time. This may involve one method: collect and analyze the data that shows how policies are operating, and adjust as and when necessary. It's like your long-term plan is malleable to newly-created information and problems. This allows governments to make informed decisions, to have a great future. This way, they can construct institutions that withstand whatever comes their way, and confirm that what they try to do can actually function. To do this, the concept of smart governance can be expressed as the dynamic capability of public institutions, to adjust to changing socio-economic conditions. Rather it transforms individual interventions on their own to the institutional level and the adaptability of the system to the new governance context.

Our findings theoretically offer guidance in understanding the historical trajectory of governance paradigms in the emergence of the digital age of transformation. The lessons are that smart governance should be framed not as a technology for public administration but the wider, institution-side transformation of data, coordination and adaptive learning. This view resonates with emergent public governance paradigms that emphasize dynamic capabilities, organisational learning and system-wide adaptability. Smart governance therefore can be seen as a governance methodology that promotes the

functionality and performance of public institutions on a system under instability and complexity.

So what we're seeing here is that it's fundamentally about connecting the smaller, local ways of delivering service with the bigger, overall mechanisms of governance. Developing good employment policies isn't just about top-level plans; they require the people delivering it to get along with the people who need it. This means that we need governance systems both up and down, along the lines and also side to side that work well together to ensure everything is connected and working. This will ensure everyone is on the same page and that the services deliver true services to the intended people. Balancing a system is about finding that balance and whether the lower-level parts of it are working perfectly well with the upper-level parts as a whole.

So, then, what this means for smart governance? These results show that these new ways of governing can indeed be successful, as long as they are made into routine ways of doing things. We must ensure that these new practices are integrated into the formal norms and policy and obtain resources, support, encouragement, skills of people in order for them be effective in the long run. Maintaining it is a matter not only of trying out new ideas, but also making them a living part of our way of governing. The significance of this is that it may inform us to make better decisions and advance the lives of people. But to get there we need leaders who are committed to making it happen and institutions that can support it.

Our results should be treated with caution. They relate to a particular context, and are unlikely to be useful everywhere. Yet they provide us with some very helpful suggestions for how to adapt our style of governing in similar places – particularly where the underlying issues are like ours.

5.1 Implications for EU Cohesion Policy

The empirical findings from this study will have a variety of important implications for the EU on cohesion policy design and action. The findings suggest that the place-based approach is crucial, and is a main contribution to the EU's cohesion policy. And smart governance provides that capability for place-based strategies to work, which does this by helping to focus the goals of our efforts with greater detail and tailoring our approaches to our local social and economic context. Not least in these less developed parts of the world, because the one-size-fits-all approach often fails to provide effective solutions as it does not take into account the specific challenges they face.

Smart governance makes it possible to ensure that our policies are personalised to each region's need, but also that we maximise all efforts on resources use. This serves as an instrument to tackle the root causes behind why these regions are stalling ahead of us and create better chances for development. So is it necessary to use data to make decisions? The study goes on to emphasize how data can help inform decisions in policy that promote unity. By putting administrative data, monitoring systems, and evaluation tools together, decisionmakers can then determine how effectively systems are working and in what areas they should spend what. This method is consistent with how the EU is moving towards performance-driven funding and making policies that aim only to deliver specific results.

Our results in reality demonstrate the necessity of coordination across government levels. In this sense, there's plenty of play going on with cohesion policy, with a lot of players, from the EU, to national-level, regional, and local levels. For things to run smoothly, these actors have to work harmoniously. If they do not, you are left with a policy that's all over the place and doesn't really do what it's meant to do. One example of this in practice is RABBSK, which demonstrates how intermediation (for these organisations) can play a real role in that coordination. So it is likely a good idea for EU policy frameworks to recognise and support these organisations more. In doing that, they can do their job more effectively and help make sure cohesion policy functions the way that it's meant to work. As a result of this, we will not be fragmented and will be sure in order to keep everything on the same page.

For tackling difficult social and economic issues – like youth unemployment – we have to work horizontally, across jobs, education and ensuring we are all included. So the policy should continue to favor the fostering of team work and collaboration in various sectors. The outcomes also significantly influence the overall course of EU policies, and most particularly their transformation into digital as well as more sustainable measures [21]. An intelligent way of governing can be a big leap towards making all of this happen by making policy systems more flexible, more empowered and more inclusive.

6 Conceptual Model

In order to distil the insights gained from this study, a new idea is being presented: Smart Regional Employment Governance. This idea is essentially an amalgamation of key elements with data-based decision-making; collaboration across various levels of government; and region-specific services. It demonstrates the connections among policy, governance and job market outcomes as seen in the context of learning from experience and continuous feedback loops.

This also builds a system able to evolve and get better; something really important for a good labour market policy and good employment outcomes. The concept of Smart Regional Employment Governance is based on understanding the complex relationships with each of these factors in a multifactorial way and helps build effective employment policy and programs.

Figure 1 summarises the structure and functioning of the proposed model.

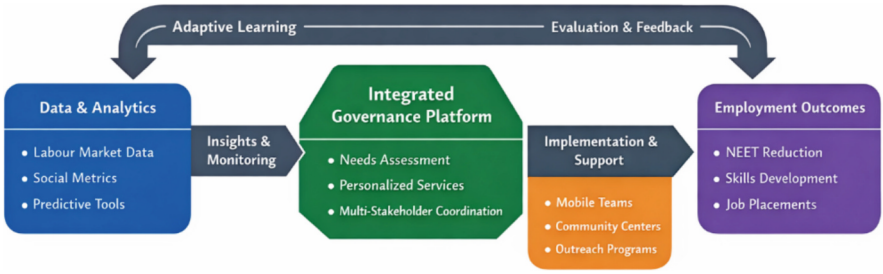

Fig. 1. Smart Regional Employment Governance model

Figure 1 presents the Smart Regional Employment Governance Model, which captures the dynamic interplay among data-informed decision-making, governance coordination, and employment drivers in less developed regions. This includes a structured, cyclical governance model in which data, mechanisms for implementation, and policy outcomes are continuously embedded in feedback mechanisms.

It's really important for you to do that when you're making decisions, you use data and analytics. This ranges from the sort of information about the job market, social trends, and the tools that know what it will be looking like as of next decade. With these array of data sources, policymakers can determine who needs help the most, what problems need fixing, and what they should do. The concept here is that by using data to inform decision making, also, being able to make adjustments as required. This is about using data to inform policy and improving over time. A good mix of skillful track-following and analysis would help policymakers craft policies informed by information and flexible to the changing times.

A key component of the model is an Integrated Governance Platform, basically the hub of smart governance. This platform lets you figure out what people need, gives you services that suit each individual and brings together a lot of different groups. It connects government agencies, job centres, schools and community organisations in an organised way, so everybody is ensured to work together to solve the problem at hand. Through this, the platform ensures that everyone's efforts are synchronized, focused on what is right and adapted to the specifics of every single area. This way everyone can more effectively collaborate to respond to the challenges local people face.

The implementation and support layer turns governance decisions into concrete measures. This involves the use of mobile teams, community centres and outreach programmes to increase the availability of territorial services to reaching vulnerable community members. Decentralised and locally embedded delivery mechanisms are of particular interest in peripheral areas, which may be limited by geographical constraints and institutional fragmentation in the provision of public services.

The final element of the model examines what is happening with people's work, looking at how people are doing at work – reducing the number of youth out of work or out of school, helping them build new skills and getting them jobs. These serve to demonstrate not only just how well each program works, but how well the whole system is functioning. This model works by looking back on results to create feedback loops, or feedback loops and learning loops. That helps the system improve over time, ensures policies are working and builds the system to be strong in the long term.

In this way, the model can continue to evolve and adapt to new information, which is crucial for good decisions and finding employment for people. The model also demonstrates the impact of employment policy on less developed regions via data in a context of governance and service delivery integrated into a consistent and adaptive system. It proves that smart governance is not a straight line; rather it is a dynamic cycle, involving the analysis, coordination, implementation and evaluation.

7 Conclusion

In this paper, we focus on the smart governance and data-driven policy approach to tackle labour market challenges in a less-developed European region. Based on the qualitative case study of the Banská Bystrica Region, our analysis shows that governance innovation rather than the technical innovation alone plays an important role in enhancing the efficiency of labour policies.

Our results show that using a mix of local support, integrated services and decision-making based on data can be highly useful not only within your educational community but also for young people who are not working or in school today. This is the group that often feels lost and out of a job. Smart governance can help overcome the countless factors keeping people from finding work by offering them individual support, facilitating access and monitoring their progress through providing them with access to services and monitoring where they are, and making sure that once they're taken onboard they aren't getting stuck. This can have a major impact in assisting vulnerable populations, such as the young, get a job and getting out.

Our research highlights insights in smart governance. Most of the time people speak of how it functions in big cities, but this paper demonstrates that it is also critical in smaller, less-developed regions. These are places where you really need good institutions in place, to get everybody to work together and be involved in making decisions. This can matter a great deal in determining what success a policy will have. Examining these factors can tell us how to make smart governance work differently in different places like big cities and smaller, less populated places, like towns and villages. This will ensure we are creating policies that help people and will ultimately benefit people.

Smart Regional Employment Governance is the brand of new management of jobs and employment in region. A framework that can help us better understand how different parts of the system interact to influence the results of policies. Understanding some big picture, such as data, how governments work together, the distribution of services and how accessible and easy it is to transit through a region can give insight into how smart governance operates across regions. That way of thinking can take its form anywhere, so it's a wealth of opportunity for those seeking to impact on jobs and governance in different regions positively.

From a policy perspective, the findings propose that smart governance can greatly advance EU cohesion policy (e.g. better designed and adjusted policies). The authors claim, we might consider its role for government departments, organisations within the EU as an additional factor or area of expertise. Yet unlocking the potential for this approach requires continued investment not merely in digital technologies but also in the infrastructure, governance, and workforce of institutions of these technologies.

There are some constraints to this study we have to consider. Firstly, we look at one case, and we are often basing our judgments on information that has been made available by the institution. This may complicate extrapolating our results to other domains. Also, we're having a qualitative study so we don't know quite with certainty what causes what. Future studies are urged, in order to consolidate our findings, to study different regions and apply a variety of methods of research. This will enable us to understand why it isn't good. We should be careful how our findings transfer to other places, and we should also

put together ways of testing our ideas more consistently. In doing these we might make our own research more reliable and helpful.

Future lines of research include:

- comparison between EU regions,
- quantitative analysis of the impact of employment policy,
- articulation of advanced data analytics and AI in governance,
- long-term sustainability and scalability of smart governance interventions.

In its own right, smart governance is an attractive and adaptable solution for tackling labour market problems in less developed areas. By integrating governance innovation with data science, it paves the way to a stronger, more inclusive and more productive approach to regional development in the European Union.

The shift to smart governance is also a component of a more systemic shift in how the public sector is operated - and in which the ability to be flexible, able to respond and to collaborate are all significant. On one hand, in the shadow of growing socio-economic uncertainty (especially based on demographic change, technology disruption, labour market change), governance systems have to be more resilient and responsive. Smart governance provides the means of doing this by integrating data, institutions and service within a coherent system.

The growing complexity of socio-economic challenges demands, as well, governance pathways that are capable of managing uncertainty, interdependencies, and rapid change. Smart governance is one way to tackle them and offers a way forward through the integration of data, institutional coordination and service innovation. However, its successful implementation has been shaped and defined by the capacity of public institutions to build and nurture those capacities, to promote collaborative processes, and to ensure they emphasize inclusivity and accessibility.

We need to be cautious about examining these results as they may not apply everywhere.

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