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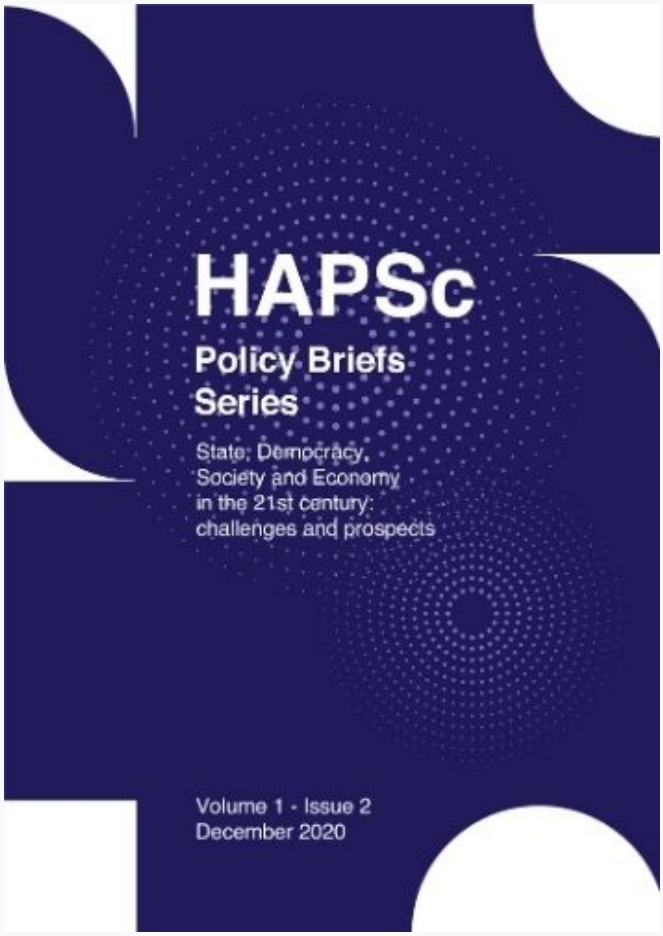

REBRAIN GREECE: The Greek Case of Collective Intelligence Ecosystem for Governmental Decision Making

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REBRAIN GREECE: The Greek Case of Collective Intelligence Ecosystem for Governmental Decision Making[1]

Dimitris I. Panopoulos[2]

Abstract

REBRAIN GREECE (RBG), a multidisciplinary and inter-ministerial working group, formulated in April 2019, is perhaps the first Greek governmental collective intelligence ecosystem, reaching out to efficiently handle issues of utmost importance, such as brain drain and digital transformation of the existing human resources to the new digital working society. As an ecosystem, it consists of several, thematic, inter-connected working groups, composed of different ministries' teams of field experts, dealing with concrete but inter-correlated issues, interoperating in a constant way. RBG constitutes a three pillar- interoperability -collective intelligence- ecosystem, encompassed in its functional architecture constant and open source, interoperability synergies between governmental agencies, different field's experts and ministerial executives, between machine learning schemes and data bases and integrated information systems info exchange modules. It uses the data analytics power of the Labour Market Diagnosis Mechanism (LMDM) and already produced data driven policy proposals. Big data applications of LMDM are interpreting and visualising different types of big data bases through cross-checking raw data and thus formulating approaches towards public policies. Through visualization softwares used for interpreting the data into policy perspectives and proposals, that policy makers examine and elaborate on the most suitable choices and activities for challenge-responsive market digital policies.

Keywords: REBRAIN GREECE; collective intelligence ecosystem; decision making.

Introduction, Background and Aim of Rebrain Greece

One of the major drawbacks of Greek public administration is the lack of coherent, horizontal and holistic, measurable through a Key Performance Indicator Matrix (KPI's), inter-governmental cooperation of the various public agencies when trying to deal, through measures, with crucial issues of our economy and society. If the wide consequences of the brain drain and the digital transformation phenomena are taken into account, one concrete conclusion springs to mind: Not a single public organization, either a ministry or an agency could on its own detect, handle and resolve these large scale challenges, due to, among others, their large scale of effect and broad range those affected.

It is crystal-clear that a human synergy framework is now much more valuable so as to encompass all human knowledge and creativity towards the two above-mentioned issues in a quantifiable way.

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But neither this human-based synergy is enough, because of the lack of broad-range systematic computing power on the one hand, and the capability of visualizing and explaining big data analytics in an interpretable way on the other.

Thus, a governmental collective intelligence decision making ecosystem in the sense of creative notional architecture of governmental decision making mechanism is now being developed so as to provide fully data driven and customized employment policy proposals. This knowledge ecosystem of policy decision-making, is affected by the work of the leading universities of the world (e.g. M.I.T.), in the field of the human and machine "superminds ecosystem". M.I.T. University has put forward the importance of the collective intelligence ecosystems for concrete policy design. Princeton University has elaborated on the new digital change management systems.

Hans Jochen Scholl, Herbert Kubicek and Ralf Cimander (2011) through their globally acknowledged academic work of the "Interoperability, Enterprise Architectures, and IT Governance in Government" have given us new exponential dynamic for expansion of the idea. Enterprise interoperability equates to loosely-coupled enterprise integration as defined previously. According to the new European Interoperability (Kouroubali & Katehakis, 2019), four layers of interoperability can be defined: (1) Technical Interoperability, or syntactic interoperability, at the lowest level, (2) Semantic Interoperability, which ensures that the precise format and meaning of exchanged data and information (3) Organizational Interoperability, which refers to the way in which public administrations align their business processes, responsibilities and expectations, (4) Legal Interoperability is about ensuring that organizations operate under different legal frameworks, policies and strategies are able to work together.

Both Legal and Organizational Interoperability, are deployed within the RBG Project, consisting of an inter-ministerial network of knowledge experts in direct cooperation with research organizations, universities, private sector's representatives and non-governmental agencies. Its utmost strategic goal is to provide national and integrated, intelligent and accurate, policy proposals for the labour market's digital transformation utilization and the reverse of the long-time brain drain effect.

Crucial pillar of the data analysing, elaborating and policy designing aspect of the project is the exploitation of the Labour Market Diagnosis Mechanism's unleashing and extending power. Labour Market Diagnosis Mechanism combines five national and three European data bases, together with real labour market flows, thus constituting a multi-parametrical tool of labour market analysis.

RBG moved forward to obtain a broad digital architecture, through the creation of a large scale portal, a contest web platform for ideas, and the remote brainstorming rooms of experts (at the first level).

Through the under expansion of visual dashboards of the Mechanism we can reach a multi-criteria statistical and actual regression of the most important parameters, when formulating an intrusive active policy for the unemployed for example. We can choose among the types and the categories of the data, prioritize them in correlation with the profiling of the focus group, or the field of training we desire for the selected category of employed or unemployed or implement other selected families of information.

What is crucial to mention is that LMDM provides the option to change and adapt the existing visual dashboards with more or less data cells to this relevant data, when referring to the under examination, concrete issue.

Rebrain Greece Project: Approach and Results

RBG since its launch, structured upon an inter-ministerial multi-knowledge base of collective intelligence and synergy. All stakeholders and experts are equal and all participate in equivalent tasks inside the project. They are also evenly distributed among important multi-task projects, such as the creation, formulation, documentation and support of content for policy proposals, various types of publicity activities, horizontal organization activities, e-project management applications and many more. RBG has a core of some people who act as an advisory board, supporting and guiding its thematic projects and its functional activities. At the same time, an operational network has been introduced for the overall monitoring of the project's working cycle. RBG already produced specific results. On average, there is a plenary session being hold every month.

The total workload of the initiative has been distributed its total work to five (5) thematic project groups of experts. The first one tries to handle the connection of Greek young unemployed researchers of various types, with the demand side of the labour market. It also attempts to find new channels of bridging the gap between the unemployed human resources and the real needs for R&D of the market.

The second manages the impacts of the labour market's digital transformation. New types of occupations, new digital sectors, new types of employment, new specific digital skills, new digital fields of knowledge, and thus new opportunities and challenges have risen. Apart from that, radical changes in the existing occupations take place, due to the exponential enhancement of technologies, thus highlighting the need for reskilling schemes for the people already working. Fintech is such an example, concerning thousands of bank employees. The reasons for being named as disruptive new technology are briefly ecplained in the following:

Advanced cities being shaped into digitized and smart cities have already adopted Fintech texhniques for their development. This requires in its order a vast array of proactive personnel and citizen reskilling in these new tools. It is well known that innovation in Fintech is a must for any city to become a smart city. It enables easy national as well as international business. For the residents, it makes life more convenient by encouraging contactless, economical, sustainable and efficient payment-related operations. One important aspect that smart city development and Fintech innovation has in common is their determination to cut bureaucracy. A city that manages to enable speedy and inexpensive international transfers will also enable its citizens with greater access to the global market.

The third refers to the creation of an integrated motivation framework for entrepreneurship. Self-employment working status, together with the expansion of the start-ups notion and the clear entrepreneurship activity are analysed here. Special focus has been put into special categories of these people.

The next thematic group, the fourth one, is related to discovering new ways of enhancing brain circulation, the broad dissemination of extensive knowledge from all around the planet, from Greeks or others distinctive scientists. At the same time, this group works decisively on how to eliminate brain waste, the situation where a young researcher, employee, or unemployed, pre and post graduate student uses on his everyday occupation activity far less knowledge and skills than acquired or obtained.

The fifth thematic project of RBG is a horizontal one, supporting all the above groups on their activity, through specific publicity actions. Nevertheless, this group also frames all the publicity strategy of the whole initiative. It has already moved to shaping a roadmap, with specific activities involved, publicity synergies, social media well thought out activation plan and many more. This group, in cooperation with the advisory board, is held responsible for the strategic management of the project. The participation in the 84th TIF is an example of this above strategy. The designing and implementation of a Nation bottom-up Action Plan is another one. The decision for the constructing of an omni-channel portal for the RBG was assumed as a proper action.

Together, since June 2019, thematic groups of the project have created the Roadmap Plan for collective intelligence governance decision making. Roadmap first described the formulation of active employment policy proposals among which the five more promising would gain publicity consultation with the Social Partners (as a second landmark).

Recently, the first five, solid, data-driven policy proposals were put publicly in discussion, and presented in the 84th Thessaloniki International Fair, in an open consultation procedure with the Social

Partners. These proposals, namely a) Advanced Skills 4 Women b) Dig_Circular (Circular Economy Actions for the Environment) c) Agrodigital Entrepreneurship d) Interoperability Governance and e) Publicity Strategy, deal directly with different important issues of the Greek economy and society.

Some of them are highly sophisticated, and thus are candidates for the best European practices in designing solid policy measures. For instance, the "Advanced skills 4 women" pays special focus on ICT software deriving from unemployed women (until 11 months) in the Municipality of Athens, seeking for relevant software mechanics occupations. A 22 cross check criteria have been used as to define a cherry-pick procedure. A great number of innovations have been integrated in this policy proposal, such as the portable lifelong learning and training account, connected with digital certificates, the rotation project route, a national integrated assessment data basis and some more.

The portable lifelong learning and training account, allows workers to acquire relevant skills throughout their careers in order to stay relevant in rapidly transforming, digital labour markets. The accounts would belong to the worker and would be portable from job to job and from status to status. Details such as contributions, number of hours per year, top ups, eligible expenses, withdrawal processes and taxing schemes will be determined later.

All these five data driven policy proposals were analysed and explained in the 84th International Thessaloniki Fair, in 2019, a broad range of stakeholders. Several technical and content questions were discussed, several relevant answers were provided and many beneficial recommendations were created.

The second one, the "Dig_Circular" proposal streamlines with the National Development Strategy, enacts the environmental activation, raises general awareness and simultaneously engages relevant unemployed people of relevant technical fields.

The existing roadmap of the Initiative now predicts the completion of these five first bottom-up and evidence-based policy proposals within the National Action Plan in late October2020. Apart from that, some of its proposals will be submitted in the EU DG CONNECT's call for proposals of the Commission with the aim to gain pilot European new type funding, as the very first fully data documented policy proposals of data intelligence.

Conclusions, Results and Further Work

It is firm conclusion, described by a serious list of assessors, that the project has been conceived as successful up to now. It has less than six months of life, began its operation on April 2019, skimmed over the governmental change of July 2019, but already reached to five (5) data driven and

sophisticated active employment policies, implementable in two months from now under a new culture of policy formulating. RBG has already designed and documented nine (9) very dense and scientific measures for the digital transformation's beneficial exploitation.

It succeeded in encompassing almost 25 agencies and above forty (40) experts of different fields as members, disseminating a modern growth mindset of equal participation and equivalent contribution towards sustainable solutions for Greece. Another crystal-clear inference is the members' high level of commitment of the project beyond typical working hours. Basic qualitative parameter of the initiative is that every single member has full view of all the aspects and the modules of the thematic projects and their activities. A third one is correlated to the real adoption of the notion of collective and policy designing intelligence, deriving from the use of integrated BI systems in one hand, and the enhanced velocity of activities of the group on the other.

Additionally, the project is characterised by increased openness, as its members seek for and already enclosed wide synergies with universities, private sector companies, research institutions, non-governmental agencies, municipalities (like Athens) blogs, digital forums and many more. Nevertheless, vast space of development for the project is disposable. Further work has to be done towards establishing RBG under an institutional but fully agile structure. Together with this, a RBG's wide platform, combing site functionalities together with portal services is under construction. This refers to a simple but integrated digital structure-portal/web spiral. RBG Executives currently work on the exact organisational context of this spiral web portal. They are setting up a list of functionalities, modules, dashboards of information, its general scope and purpose and the overall benefit for the labour market and specific parts of it.

Towards this goal, a documentary action plan is introduced predicting exactly the technical and content steps that need to be done. There is a series of options under examination. For example, the advisory board's selection of people that will be engaged, the existence or not of the supporting committee, the introduction of modules and functionalities within the new structure, its digital footprint on the web, the establishment of an issue-contest web in its digital framework, its cyber security settings, the examination of the option of classified users, and many more relevant issues.

A second field of the oncoming proposed activity is strongly correlated with the national coordination of the project as many different governmental and nongovernmental stakeholders from various levels of hierarchy participate in the project. Public consultation for the five proposals of RBG during 84th International Thessaloniki Fair, in 2019 (TIF) with an academic core of five universities were incorporated in the project.

Specific relationship describes the interconnected 'trends': digitalisation, globalisation, the rising diversity of work arrangements and aging workforce. These trends have 'implications' for labour markets and this is a further field work for RBG. They include rising inequality, changing business models, job displacement, workers' skill depreciation and rising skill gaps. There are 'challenges' for policymakers from these implications.

At the level of workers and human resource policies, RBG will focus on these challenges mainly related to workers' skills to keep people employable in the future. At the level of businesses and labour relations, the challenge is to provide decent work by creating high-quality jobs and safeguarding worker well-being and a healthy work-life balance.

As a new innovative answer to these rising issues RBG is the attest innovation towards new agile institutional structure. Much work has to be done towards public, national, and European networking and synergies. The project has also various functionalities to integrate to its oncoming digital footprint. This digital environment of the project will need to be interlinked with all the project's social media presence.

Further work is anticipated to take place towards the inclusion of the on-line courses and the interactive synchronised and non-synchronised training lessons for well targeted segments of our society. Based on this aspect of the pillar, synergies for the creation of such training programmes have just started.

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