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DRIVERS FOR PUBLIC VALUE CREATION IN UNIVERSITIES AND COMMUNITY AWARENESS

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ABSTRACT

The research addressed the capacity of higher education to contribute for public value creation, considering developing countries and developed ones as well. The Information and Knowledge society is supported by Information and Communication sciences, which give an essential contribution to show how scientific knowledge is developing and which are the most relevant goals to achieve. We concluded that indicators of spill overs are essential, and that they must be shown outside the academic community, in order that the public is constantly informed, and therefore has a perception of value creation. If academic communities don't interact with the society using a speech adapted to the new generations, the public value perception will be jeopardized, and intellectual capital indicators only be of interest for university financial managers.

Keywords: Public Value, Universities, Spillovers, Information Society

INTRODUCTION

The discussion about public value creation always comes along, either when new governance forms are addressed or when we need to make some type of analysis in public funds allocation, and employability. Within the European Union, there are different understandings of public value (Bentzen, Sorensen & Torfing, 2020) create by universities since countries perform different policies to create secondary studies curricula. Moore (1995); Meynhardt (2009); Meynhardt, Gomez & Schweizer (2014) talk about the capacity of organizations to create value for society. This value includes value that results from improving the government itself as an asset to society and value that results from the delivery of specific benefits directly to persons or groups. In our research, we want do address the public value creation correlated with education policies (Antipova, 2021) and how the indicators are built to justify the importance of higher education, according to Bologna process or any other in the world. Generally speaking, we can say that if a public measure makes a bigger number of citizens better off than the ones that perceive the measure is hurting them, then the measure was adequate. The reality is that governments always need more funds than the ones they can actually afford to, and the discussion starts when priorities are found, and therefore public policies show, without doubt, which are the main interests, established by any political proposal. In our time research programmes follow public strategies, regarding knowledge use, which represent also power and economic capability. We followed the Open Science policies, the influence of technological use in scientific knowledge circulation, and how the science networks all around the world became important.

Regardless of all types of discussion, the fact is that during the pandemic the services provided by e-government, where perceived as public value, once all stakeholders were living in a disaster situation. E-Gov. initiatives were perceived as very important by the whole society (Ives, 2011). Our research decided to study how public value can be created through higher

education, even when the educational policies are also worried about employment, since an educated society deals better with fast changes, as the ones we have been through in the last two decades. The interest of this research lies on the need to produce proof, how higher education as an impact in public value creation, and the importance of tertiary education. In the last decades, we have been seeing a growing interest in sustainability (Ibánez, Ferrer, Muñoz, Claros & Ruiz, 2020; Zuniga-Jara, Sjoberg-Tapia, Rojas-Guerra & Valenzuela-Cortes, 2020) and behaviour types which contribute to sustainability, but we also need to check how education gives a framework, to better understand sustainability procedures, and how citizens with better education in scientific knowledge, understand sustainability policies as a priority in our times.

We decided to shape up some research questions, as follows:

1. Why the value produced by public higher education is not perceived as public value?
2. Which types of indicators will contribute to promote the importance of public higher education?
3. Which is the basis to create criticism about the public value concept?

LITERATURE REVIEW

According to Moore (1995) public sector organizations produce value when they meet the needs of citizens: the higher the level of needs satisfied (from both a quantitative and a qualitative point of view), the higher the amount of public value created. De Graaf, Huberts, & Smulders (2016) mention that public values are the important qualities of public governance. Throughout a cost–benefit analysis, the public values are given a monetary value and the optimum is calculated and they concluded that proper governance ought to be performing governance and responsive governance. Therefore, the responsive governance (actual e-gov) (Sacchetti & Catturani, 2021) entered a new era in order to be quicker on satisfying society needs. The universities in the public sector create public value, since they take care of knowledge creation that can be used later on, in benefit of the society as a whole, however some of this knowledge can be used later for private use, and this perception show us that government can be facing interest conflicts, which are not easy to discuss (Cordella & Paletti, 2019; Coyle, 2010).

In a knowledge society, the point is not how to manage already existing knowledge and taking advantage of this raw material, but it is also important to find new production forms, in order to solve problems as well as finding the ones we don't even know existed. At this stage we will not address how public value creation, by universities, can be used in private ways, since government grants for research usually comes with obligations, to avoid conflicts of interest. In our days, it will be difficult to make a straight division- private and public- once the partnerships (Petruzelli, 2020; Page, 2015) are sometimes necessary, however codes of ethics must be considered and considered. Our point is that if we consider knowledge creation as an important issue, we want to move on, research wise, taking into consideration those public universities, as knowledge creation and development are hubs, with specific needs, and if anyone decides to diminish their value, we surely can create indicators to prove them wrong.

A discovery state of mind is essential in any organizational structure and culture, nd being so the university culture can't be bureaucratic in culture, though a basic organization is needed, and at this point technology came to rescue us. Due to technology use all administrative tasks can be controlled through software, leaving people more time, for what really matters, knowledge creation, using intellectual capacities both from researchers, teachers, librarians, and students. Altbach (2004) already called for our attention regarding the challenges of globalization and its implications in universities organizational culture. In the European Union we had the Bologna Process in order to build a reference for all universities, considering the importance to build knowledge. After NPM approach to public service, it is proved that we need to "move beyond the narrow market versus government failure" (O'Flynn, 2007). This view calls upon a new insight in terms of public value creation, and about how it is perceived by the

society, and we believe that is consensual that the public universities play an important role in this procedure.

As we analyse the importance of public universities in value creation, the point is to check how we are going to measure this value, since from the scientific perspective, only the variables that can be measured and evaluated, contribute for scientific development. Our aim therefore is to review recent literature in order to find the gap, knowledge wise that will allow us to build up indicators, which show beyond any doubt, that public universities create public value. Alves (2011) mentioned that the perceived value of the university in higher education and how the university image contributed to a better judgement in terms of quality/price ratio, all over Europe. Even so, we understand that a good image is not enough in scientific terms and that indicators must be strong enough, to show how public value is created.

Díaz-Méndez & Gummesson (2012) added that the information asymmetry between students and teachers could damage the evaluation made by students about teachers work, and we add that a better judgment by students will be built simultaneously, with competencies obtained by students throughout their courses. Second, Elena-Perez, Martinaitis, & Leitner (2015) used a model to evaluate the intellectual capital creation in universities and concluded that the results could be difficult to find, conside ring universities present several types of organizational cultures, and some are more open to change than other (Dee & Leisyte, 2017). Therefore, in their opinion it would be difficult to create an indicator of intellectual capital creation (Michalk, 2017), and we disagree from this point of view. Pucciarelli & Kaplan (2016) concluded for the need to expand interactions and value co- creation with key stakeholders, in the universities, and we comment that the existence of public-private partnerships can be helpful (Lopes & Alves, 2020), as long as ethics are maintained, because after all even in private partnerships there are rules to be followed.

Dziewanowska (2017) mentioned that student's opinion about the perceived value of their university ought to be studied using three main factors- functional, relational, intrinsic, which could explain their views. Dee & Leisyte (2017) addressed the value creation in universities, with the need of change for better knowledge circulation as well as an improved view of their work. In this case we understand that quality information networks must be explored, in order to reach all stakeholders- government funding, society in general, student communities. Sułkowski (2019) mentioned that in China some universities decided to choose mergers, in order to have better use of funds, and we believe that this decision would be acceptable if they are supported by tight financial control. Martinez- Buján, Santiago-Gómez, Diz, Cortes-Vazquez & Golías (2020) concluded how the social dimension of sustainability in higher education institutions can be emphasized, which once again calls for indicators Cavallone (2021) called our attention to the importance of the university connection with its own external environment, and in this case we must check, the institutional framework in the region and the local community (Sanchez-Barriolengo & Benneworth, 2019). In our view, it will be important if the local institutional framework is capable of attract funding and empirical knowledge (Hartley, 2017) to strength up a hub knowledge. In what intellectual capital is concerned (Secundo, 2015), we know that private firms have already found models to take care of that question. Our approach to public value creation and management, doesn't find its rationale based on any type of moral values within a framework valued under a paradigm in time, and we consider that any government allocation of funds is based on priorities and return is expected. The return amount for society should be calculated considering the contribution to achieve citizen's needs, and the more the return will overcome the expectations, the better for any society. Kaplan & Norton (1996) mentioned the internal processes accounting as a way to see how the organization could and should excel in order to satisfy its stakeholders and in the case of the university we must check, who are they? The researchers that need funding to keep their work going on, the teachers who are transmitting the basis for future knowledge creation? The students who later on will use that knowledge? In this case shouldn't we add the external environment of the organization and how the community values the presence of the university?

Based on Kaplan & Meynhardt talked about the public value scorecard, which can contribute to a better understanding of public value created by public universities. The University organization always produces spillovers wherever its location, and there is a communication flow from tacit knowledge to explicit knowledge, within the university itself and the university and the scientific community.

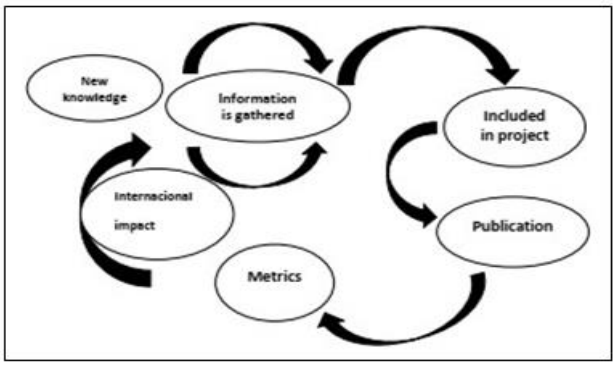

FIGURE 1
INFORMATION FLOW FOR VALUE CREATION IN UNIVERSITY

In order to allow the information to flow, the structure must be prepared to create communication plans, which go beyond the international impacts among scholars. It's necessary that the society is aware of the work going on and that the value is perceived by the community (Figure 1). Open Access movement created possibilities for research results circulate faster and this type of infrastructure is the better way to promote knowledge circulation. All interested stakeholders can access to knowledge and the dissemination process is indeed a system to public value creation. Once we are as well in an information environment, the communication plans must be made in accordance with new rules. Open Access (Rodrigues, 2012) and good communication plans are not self-exclusive and the more the general public is aware of research results the better the public perceived results. We consider that different stakeholders may have different ways to perceive the value, since researchers can check the impact of their publications and other stakeholders would probably need to receive further information through newsletters or through social media.

The main question is that universities must create a bigger interaction with their communities and avoid being considered a closed organization in their own neighbourhood, since it's perceived Open Access and Open Science exist, but they are not perceived by the whole society as open for anyone, with an internet connection. Besides the number of articles published by researchers from a certain university is important to verify the existence or not of spillovers connected with the university. The main literature usually classifies as spillovers, the firms or other entrepreneurial activities, we usually call incubators, but in our view this idea of spillovers (Cavallone, 2021; Kallar & Antoncic, 2015) is a reduction of the real effect the university can accomplish in geographical terms. Around the campus we can find a large number of services, needed by all the native stakeholders (organizational members, researchers, teachers, students, staff in general) and considering the public value definition, as a service or activity that the public needs, we think that we must not be indifferent to all activities that a campus attracts.

Regardless of these aspects, we can measure the public value creation by using their repositories, which have a major relevance for knowledge creation. Once we consider knowledge is cumulative, and each new piece comes in the top of a previous one (Rodrigues, 2012) open access became an important tool in any type of science. The repository not only became a warehouse of knowledge, where everyone can check the existing gaps and go from there to future creation.

In the particular case of Portugal is known that the universities have been attracting international students, namely those coming from Portuguese speaking countries such as African countries and Brazil. Other situations are related with the countries were the Portuguese diaspora is well known and appreciated. The student's mobility may occur due several factors such as- language, accommodation price/quality and previous knowledge of curricula.

The Portuguese universities attractiveness needs to be reinforced, and this phenomenon can also attract more investment, and better world rankings. Owen Smith (2019) say companies can move, universities don't, though they can create online programmes and representations in other countries. The university as an anchor for knowledge creation is an important way for public value creation. Considering all possible analysis on public value creation, we still struggle with the indicator's choice, and statistically in the global world, nations compete trough their capacity to create knowledge. However there is still the question, to prove that all societies really benefits from their own knowledge creation, and we don't think is enough to consider only citation metrics, for published research.

METHODOLOGY

We must start by choosing the research design, we will use, in order to give us the assurance that we will be able to confirm the public value creation. Some countries decided for patents registration, which we believe it's a limitation, because of international legislation. There are several indicators of universities quality that we can consider, such as: the university brand; the student's satisfaction and employability; cooperation with firms; quality standards and relationship with society. These particular indicators can be used as marketing material but we prefer to use a broader impact based on projects that were later on developed and used by entrepreneurial projects, which in our view is the best way to confirm public value created by universities, besides the knowledge development necessary to be an academic expert in any field.

Fazlagic (2005) decided to analyze intellectual capital created by universities, using the following indicators:

Resources: Number of researchers, percentage of researchers in total employment; total research infrastructure investment.

Activities: Research expenses by employee; technology expenses by employee.

Results: Number of international students; government grants for research; cooperation with institutional organizations.

In order to address public value creation by public universities, in Portugal, or in any other country, we ought to choose the indicators to build up that type of research, and in our case, we decided by the following:

- Number of internationally recognized researchers (Araujo, 2007)
- Public-private partnerships in research (Martins, Marques & Cruz, 2011)
- Start-ups create on campus (Coelho, 2020; Barba, 2016)

The reason why our choice was built up, based on spillovers of academic research, and not only by citations of academic literature is related with the actual interest in sustainable development, therefore we understand why investment in research will more easily found when we talk about how society can use knowledge developed in higher education organizations, and which are the instruments that an university must choose, in order to increase that perception. The question is that if society doesn't receive information about the research results, and the impact of government expenditure in education, the society will hardly understand the benefits from the investment and that is the main reason why, one most invest in research indicators and

public value creation. As a result of a better communication channels, used by universities towards the society stakeholders, it will be easier to attract investment and create public value.

It is important to clarify that public value exists, when it's possible to prove that the whole society understands there is a benefit from knowledge creation, as well as that the investment made created results, which will be available in a medium run.

Purposes

Hartley, Alford, Knies & Douglas (2017) "Break down the concept into manageable, operationalized segments for detailed analysis". Twizeyimana & Andersson Government Information (2019) built up a model to access government value creation, but still we find lack of empirical research that can be a strong proof of value creation.

Universities must interact with their local communities and produce initiatives to call the attention of the society that they are an aware of directionality of communication channels. We also understand that with globalization, sometimes it's difficult to retain knowledge created locally, which is a critique often addressed to actual governments, particularly in small European countries.

At this point we must check the spillovers of the knowledge creation, and if the difficulty in retaining this knowledge is correlated with the position of the country in financial capacity or any other reason. In the particular case of the European Union, we can find a strategy that supports research in particular areas, using € 95.500.000 of funding (Horizon, 2021-2027) for the following strategic areas:

- Healthy oceans, seas, coastal and inland waters
- Adaptation to climate change, including societal transformation
- Climate-neutral and smart cities
- Cancer
- Soil health and food
- (Source:c.europa.eu/info/sites/default/files/research_and_innovation/strategy_on_research_and_innovation/presentations)

Considering this strategy, we can check that, regardless of the importance of these areas, several areas of research will be left out, and if consider that in Portugal, none of our universities is part of the League of European Research Universities, we understand the difficulties to funding and top knowledge access, which will make more difficult to understand how we could compare Portuguese universities public value creation, if we decided to compare with results with any other country in the European Union. However, we will not use this argument as an excuse, and we will continue to stress the need for strong public value indicators, as part of governance indicators in our country, particularly in what higher education is concerned.

Kalar & Antoncic (2015) made a research using data from four european universities to check, how their research had impact on private activities -University of Antwerp (Belgium), University of Amsterdam (Netherlands), University of Ljubljana (Slovenia) and the University of Oxford (UK). They concluded that the academic community is still divided into two parts, regarding attitudes to the entrepreneurial university, and that academics in natural sciences have a bigger entrepreneurial orientation, than the ones from social sciences departments (Audretsch & Link, 2019; Marozau, Guerrero & Urbano, 2021) stated that higher education continues to be an enabler of economic development and concluded that government must include their universities in innovation systems (Barra, Maietta, Zotti, 2019; Koolma, 2013), to make sure that the knowledge is absorbed and will create better conditions for development. However, we understand that Portugal is already a developed country, therefore, in the next level, countries are competing among themselves for value creation. Any member of the UE will try to attract investment, and to fulfill that wish it will be necessary to have citizens with higher education levels, to work in knowledge-based activities.

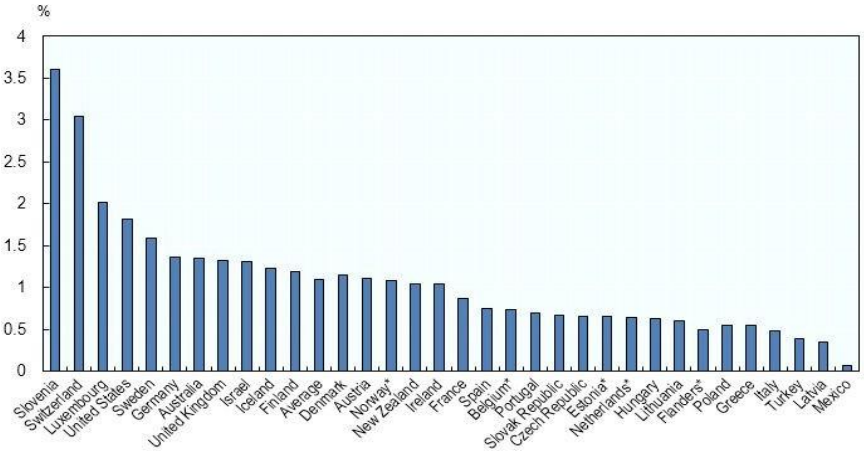

FIGURE 2
OECD PHD HOLDERS IN PERCENTAGE OF TOTAL POPULATION

In the above figure we can check the percentage of PHD holders, in the total population, in OECD countries, which we believe is a strong indicator of public value creation.

CONCLUSIONS

The university, public or private, plays an important role in any community, once it opens channels for knowledge development and absorption. We decided to research the public university as a place of public value creation, considering the possible spill overs for the society (Audretsch, 2017). Going a little further it's possible to understand that in the information society, the importance of the geographical variable is over, since any student with an internet connection can have access to studying materials, can be present in classes using videoconference technology, so the scope of university studies can be enlarged.

However there are still a number of questions that are not clear, which is the public value creation by the public university, if we don't decide for better promotion of indicators, of intellectual capital created by the university. In a complex society (Pucciarelli & Kaplan, 2016) there is a particular need for multidisciplinary studies, particularly if the value creation is understood only within the university networks.

We concluded for the need of better use of communication channels in public management, to clarify the value creation, in relation with investment, considering that all e-gov initiatives are not in use in many countries, and we didn't find any way to support criticism to creation of public value by universities, for many reasons. Public value is created when governments create possibilities for citizens to develop themselves, create competencies. Public value is created whenever knowledge is put at one's accessibility and particularly when the student needs a scholarship, public value is created when a community of academics and students work as a team to create new knowledge, either for built entrepreneurial orientations or to create better public managers.

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