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EXECUTIVE SUMMARY OF THE THESIS

The Contribution of Individuals to Public Service Innovation: A Design-driven Perspective

MASTER THESIS IN MANAGEMENT ENGINEERING

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Relevance of the Topic and Problem Setting

The relationship between innovation and public services has been increasingly important in the last few years, since many countries have recognized the role of innovative public services in tackling economic, social and environmental challenges. In Europe, the European Commission approved in 2021 the so-called NextGenerationEU to finance the recovery from the Covid-19 pandemic and boost development. At the core of the program there are innovation and public services: funds will be mainly directed to environmental sustainability and digitalization (i.e. green and blue transitions) but also to infrastructures, healthcare, higher education and research, as the Italian PNRR demonstrates. Innovation and public services are also at the core of other national plans and international initiatives, as the 2030 Agenda for Sustainable Development launched by the United Nations in 2015 proves.

A specific context where it is relevant to investigate the intersection between innovation and public services is urban mobility and public transport. Combining urbanization, increasing life expectancy, the impact of transport on global warming with the intrinsic importance of mobility in the life of citizens, it is immediately clear why this context is a critical scenario where economic, social and environmental issues merge, and why it is a priority in many political agendas, at least in Europe. In addition, in the field of mobility, innovation is not only pushed by environmental or social challenges but also by new disruptive technologies such as Artificial Intelligence, Internet of Things, Big Data. These and other technologies enable new business models and value propositions that will likely have an impact on any actor involved in the supply chain, from suppliers through manufacturers to retailers and finally customers.

The future of mobility is as uncertain as the outcomes of those international plans and programs. What seems to be sure though is the need for cross-sector collaboration, of partnerships and alliances among private, public and third-sector organizations. Indeed, especially in the context of urban mobility, public services do not exclude or diminish the crucial role of private companies, whose competences, assets and energy

are essential to tackle public challenges and achieve public goals. It is evident then how relevant it is to dive into the intersection of innovation and public services, in particular in the context of urban mobility, and investigate those actors and organizations that are actually dealing with it.

Literature Review

Given our interest in innovation, value creation and public services, we have reviewed some streams of the literature that deal with those concepts. In particular, the literature review has been articulated into three main sections, which are briefly summarized in the following.

First, we have addressed the stream of literature that deals with value creation and services. In particular, the most important contribution we have reviewed is the work of Stephen Vargo and Robert Lusch (2004, 2008, 2016) on Service-Dominant Logic. This theoretical framework provides a new perspective on services and value creation. The authors indeed state that products, goods and services share the same essence: they are all applications of some specialized knowledge and skills, and they are all exchanged exactly for that, for the service they render. Vargo and Lusch also reframe value and value creation by arguing that users are co-creators of value, because value is conceptualized as value-in-use rather than value-in-exchange and it is always determined by the beneficiary.

In spite of the prominence of SDL, it was necessary to move from the theory of value co-creation and address that stream of literature that leverages SDL to investigate the context of public services. The most relevant work we have reviewed was the one by Stephen Osborne et al. (2012, 2018, 2022) on Public Service-Dominant Logic (PSDL). As the expression suggests, they initially elaborated an application of SDL to public organizations dealing with the management and marketing of public services. However, they then moved away from the work of Vargo and Lusch and coined the term Public Service Logic, whom they integrated into a unified framework – the Public Service Ecosystem – that organizes the different actors and their contributions to public value co-creation. As comprehensive as the Public Service Ecosystem framework may be, it still provides an overview of value creation processes in the public context, identifying the different actors involved but not really examining in depth the individual contribution and role of such actors, or the mechanisms through whom they interact and influence each other. That is why in the third and last section of the literature review we address a few contributions on the rationality of individuals who are involved in value creation processes. In particular, we build on the definition of 'procedural rationality' by Herbert Simon (1976) and review a few theories and models that describe the action and logic of individual innovators as they are involved and behave in value creation processes. One of the key works we have reviewed is the one by Sarasvathy (2001), who introduces the term 'effectuation' to identify a different kind of rationality that is typically followed by entrepreneurs and innovators. That work was then used by Wiltbank et al. (2006), for example, to devise a taxonomy of individual rationalities and strategies, making the case of 'non-predictive' strategy. Other contributions were reviewed but there were still limitations and further questions about the rationality of individuals innovators.

The limitations that have been identified through the literature review give shape to the gap the work tries to fill, the research questions it tries to answer, which are summarized in the following section.

Research Question and Methodology

The research investigates the role and contribution of individual innovators who are involved in innovation processes that concern public services and engage a plurality of public and private actors.

In particular, this is the research question, which is articulated into two parts:

I. Considering the contribution of individuals involved in innovation processes that aim at radically innovating a public service, which logics and rationalities do they adopt and follow, and which characteristics do these logics have?

II. Moreover, how could (the knowledge about) such logics be used to enhance the effectiveness and radicality of those innovation processes with particular

reference to the role that private providers can play in these contexts?

In order to answer these questions, it is crucial to point out first the underlying theoretical framework. The most relevant contribution is the work of Roberto Verganti (2009, 2016). We indeed embraced the concepts of design-driven innovation and innovation of meaning, and we also considered the 'B2B2C model' as applied to public organizations and citizens. Indeed, we think of innovation as the ability to create something significantly valuable for users and intended beneficiaries through radically innovative public services. However, we also used the theories and concepts of Service-Dominant Logic, procedural rationality, effectuation, non-predictive strategy to identify a few key elements about the rationality of individual innovators that would have been interesting to investigate.

Once we pointed out the theoretical framework, we designed the research methodology and adopted a qualitative research method. Building on the work of Handfield and Melnyk (1998), we defined the purpose and structure of the research, and also the techniques for data collection and analysis. The goal of the research is to map the key variables and themes within the scope of interest, and eventually provide an overview of the possible relations and patterns that characterize the context. The research is structured into few focused case studies, and the data collection and analysis techniques are respectively semi-structured interviews and content analysis.

It is also important to stress the difference between 'case' and 'unit of analysis'. On one hand, by case we mean the set of actors that are involved in some innovation process or context, around specific service innovation projects. On the other hand, the unit of analysis was defined as the individual innovator involved in a specific process or project rather than the innovation process itself. In this way it was possible to interview multiple individuals who contributed to the same project and thus have several different perspectives on the same case.

Once the research methodology was defined, we implemented it and followed the steps that are reported below:

1. We identified and selected some cases of interest.
2. We contacted and interviewed two or three individuals that were involved in those cases and who had accumulated a significant experience.
3. We carried out and transcribed the interviews.
4. We analyzed them using content analysis.
5. We finally pointed out the findings, which were then elaborated to answer the research questions and draw the main results, implications and conclusions.

Regarding the data analysis phase (step 4), it is important to note that we were guided by the Gioia methodology. Indeed we organized the data into a data structure, and we classified and aggregated them through first-order concepts, a few second-order themes and three overarching dimensions.

Empirical Research and Findings

Key findings were aggregated into three macro-themes:

1. Specificity of the service and of the organizations considered
2. Typology, contribution and role of the actors promoting service innovation
3. Approach and rationality of individual innovators

First, pretty soon it was clear that urban mobility and public transport is a specific field, with its own peculiar aspects. Based on the evidence collected, we can say that public mobility is a highly regulated field, characterized by a quite inelastic demand and high capital intensity. These elements combined with time consuming projects generate a condition where profitability seems to be hard to achieve. It was also clear that public organizations, which are usually involved in the provision of mobility services, are very much different from private companies, in terms of priorities, interests, constraints, external relations, and thus mindset. For example, differently from the private sector, in the public one peers collaborate rather than compete, and exchange information freely.

Second, we found out that in the context of public mobility there are typically four kinds of actors involved: political bodies, public administrations, public companies or agencies, and private

companies. All of them can promote and contribute to innovation, but each of them has its own interests, resources, power and thus role within the innovation process. In more than one instance, for example, public administration plays the role of coordinator, since it is in between political bodies and private companies. It was also interesting to see the reciprocal relationships among the different kinds of actors, and to recognize how central collaboration is to the effectiveness and radicality of innovation processes.

Third, we highlighted the critical role of individuals in innovation processes that concern mobility services. In more than one case, innovation itself was promoted by one person, without whom it would have been impossible to realize it. Through the interviews, it was possible to collect data about the individual approach and rationality of innovators. We found out that different innovators follow different rationalities and approaches: some start from their values and visions, and eventually design a solution accordingly; some others focus on the needs and requests of users and intended beneficiaries; some others again try to monitor the surrounding context and exploit opportunity windows. What most of them seem to have in common is a criterion to judge the value of an innovative initiative and also the ability to read and understand the external context.

Discussion of Results and Proposals

When we deal with the rationality of individual innovators in the context of public services, we argue that there are two different and complementary types of logic. Those two types have been named 'logic of why' and 'logic of what and how': the former is the criterion the individuals use to distinguish what is valuable, meaningful and worthy from what it is not, whereas the latter refers to the criteria and solutions they actually adopt to carry out the innovation process and create value.

Why, what and how dimensions are held to be in a specific relationship, represented by the triangular scheme below: why is at the top of the triangle, whereas what and how at the bottom, so to stress that why, that is the meaning and value of innovation, directs the other two dimensions and at the same time is supported by them.

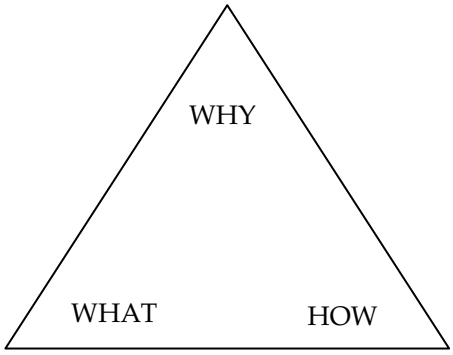

Figure 1: Triangle Why - What - How

Based on the evidence collected, it was possible to recognize different instances of the logic of what and how, which have been modeled through the 'X-n-provide' paradigm. In particular, we identified six different logics – Design-provide, Listen-provide, Edit-n-provide, Plan-n-provide, Spot-n-provide, Network-n-provide – and classified them according to the dimension – what or how – they are driven by.

Despite these different logics can be effective in different circumstances, we claim that those innovators that adopt the principles of 'effectuation' are somehow more successful. Indeed, the ability to read the context and exploit contingent opportunities is critical, especially in the case of public services.

We have also extended the B2B2C model by Verganti (2016), because the application of it to the public context produces few insights and many criticalities. The most critical point is that it is too simplistic, rigid and linear to represent the complexity, dynamicity and non-linearity of actual innovation processes that concern public services.

Thus, we devised an alternative 'innovation clock model', which is essentially an intuitive graphic representation of the actors involved and their contributions to public service innovation in a given point in time. The model provides at the same time the flexibility to capture the complexity and variety of innovation processes that concern public services and enough clarity and simplicity to be actually used by innovators involved in such processes. In particular, it can help private partners to question and define the contribution they can bring to public service innovation.

A simple representation of the model is reported below. The face of the clock contains the different contributions (i.e. C1, C2,…,C6) that the actors (i.e. PA, PT, PP, PR) may bring to a certain innovation process. In particular, the model can and should be adapted to the specific scenario of interest.

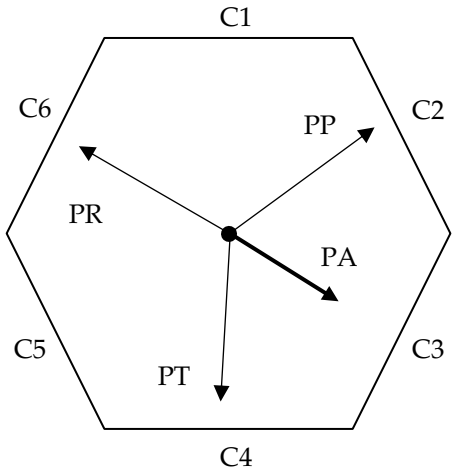

Figure 2: Representation of the innovation clock model

In conclusion, we assessed the contribution of innovators and their ability to realize radical innovations and generate the value that is embedded in the logic of why. In particular, we argue that, in the context of public services, in particular of public and urban mobility, a radical innovation is more likely to be realized in the medium-long term, as long as the actors involved in the innovation process share the value of it and collaborate effectively, or, in other words, have a common vision and adapt their rationality to the circumstances. This argument is directly linked to effectuation, to the ability to exploit contingent opportunities, which is particularly important for public actors.

Conclusions

To sum up the whole argument, we stated that, in the context of innovation processes that concern public services, the rationality of individuals puts together three dimensions – why, what, how – that could be organized into a triangular scheme. This scheme stresses the why dimension, the criterion individuals use to distinguish valuable and meaningful projects, though it also highlights the importance of the what and how dimensions, that is the pragmatic criteria and logics innovators use to turn a meaningful vision into a valuable public service. In particular, we argued that there is a plurality of logics that innovators adopt.

Then, we extended the B2B2C model and showed the innovation clock model. This model embraces the complexity and dynamicity of public service innovation, and enables private partners to figure out the contribution they can bring to innovation. In particular, multiple are the contributions private organizations can provide: in some cases, they can help public organizations to question the value they want to create for citizens, and to envision and eventually design an innovative public service; in other cases, if public organizations already have a clear vision or a well-defined objective, private partners can leverage their resources and competences to help them to turn that vision into reality.

Finally, we addressed the overall contribution of individual innovators to public service innovation and value creation. In particular, given the characteristics of the context in scope, we stated that radical innovations are more likely to be realized in the medium-long term. This seems to be particularly relevant to innovators from the public side, and we identified some metaphors – archer, hawk, minister of foreign affairs – to stress the ability of these individuals to manage the resources at hand and adapt their rationality to local circumstances. In conclusion, we drew a few implications for private partners who are involved in this context and contribute to public service innovation.

Then, building on some of the limitations identified and also on new questions that arose, we suggested two possible research paths, among many:

- First, try to assess the replicability of the findings and the validity of results in other public services and geographical contexts. For example, it would be interesting to investigate how the characteristics of the public service considered influence the rationality and logic of those individuals who try to innovate it.
- Second, try to test the usefulness of the theoretical tools to practitioners, and eventually restructure or refine them. For instance, it would be interesting to test the

pros and cons of the clock model, or the effectiveness of the suggestions and implications for private providers.

Indeed, it would be important to assess whether the knowledge and implications presented are usable and actually used by individuals and organizations who want to leverage innovation to generate a positive impact on reality through public services.

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