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Which innovation regime for public service innovation networks for social innovation (PSINSIs)? lessons from a European cases database

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#### Abstract

This article is devoted to collaborative systems that are being established, within public services, to design and implement social innovations. These systems, which we refer to by the acronym PSINSIs (for "public service innovation networks for social innovations'"), reflect a dual process of servitization (the rise of services in the network) and de-marketization (the rise of the non-market dimension) of the traditional innovation network notion. Drawing on a database of 24 case studies collected in 5 European countries (France, Denmark, Hungary, Spain, Norway) and 5 areas of wicked social problems (elderly, education, minorities, long-term unemployment and environmental issues), this article aims to discuss how PSINSIs fit into the entrepreneurial and routine innovation and learning regimes described by evolutionary economics. Beyond these general categories, it highlights the diversity of the configurations of these regimes and their interactions.

Key words: innovation network, public service, social innovation, innovation regime JEL codes: L3, L88, O35

#### Introduction

This article is given over to networks established to design and implement social innovations in the field of public services. The question is not simple, since the three terms of the issue ("innovation network", "social innovation" and "public service") stated here separately are, actually, closely correlated, and to a certain extent, synonymous. Therefore, in its formulation, our project can be criticized for being somehow pleonastic. Indeed, if the problem is tackled from the perspective of the definition of social innovation and vice versa. Some works consider social innovation and public innovation to be synonymous (Sorensen and Torfing, 2013; Cels *et al.*, 2012; Bekkers *et al.*, 2014). The justification for this identification is based on different arguments. The first argument is that the purpose of social innovation is to produce public goods and services, *i.e.* to create public value, in other words value of general interest, regardless of

<sup>\*</sup> This paper draws on a research carried out within the Co-VAL project. Co-VAL ("Understanding value cocreation in public services for transforming European public administrations") has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 770356.

the sector considered (public or private). In this sense, social innovation is considered as public innovation, even when it is undertaken by private actors. The second argument is that, conversely, public services always have a social dimension, as far as they are always aimed at solving social problems. Therefore, the new solutions they propose would be social innovations. It can also be said that *social innovation is ontologically collaborative, interactive or networked*. Social innovation is thus envisaged as a *collective* activity that requires the mobilization of a variable number of public and private agents, in particular the end user/the citizen. This collaborative or network dimension of social innovation is not only considered as a characteristic of its mode of organization, but as a fundamental element of its nature and definition (O'Byrne *et al.*, 2014; Ziegler, 2017; Vickers *et al.*, 2017; Philipps *et al.*, 2015). Thus, the definition of social innovation is consubstantial with the creation of new social relations or collaborations.

These networks devoted to social innovation in public services, which Desmarchelier *et al.* (2020) call "public service innovation networks for social innovation" (PSINSIs), have been the object of relatively scarce literature. In the field of "public management", awareness of the interest and importance of this type of collaborative arrangements is part of the rise of the new public governance paradigm, which is also particularly evocatively called *networked governance* (Osborne, 2010; Voorberg *et al.*, 2015; Mergel, 2018; Crosby et *al.*, 2017; Torfing, 2019; Desmarchelier *et al.*, 2019). In the field of "innovation studies", the emergence of these PSINSIs lies at the confluence of two conceptual trajectories: a servitization/tertiarization trajectory (increasing power of services in the network) and a de-marketization trajectory (taking into account non-market activities).

The implementation of multi-agent collaborative systems for innovation in public services has often been seen as a set of transitory bricolage operations, carried out by fiery souls. In reality, the logics or regimes of collaboration for social innovation and value creation at work in PSINSIs are multiple and more or less formalized. This article is based mainly on a database of in-depth case studies carried out within the EU-funded Co-VAL<sup>1</sup> project, and aims to highlight and discuss, within a neo-Schumpeterian tradition, the diversity of these collaborative regimes for social innovation.

This article is organized into three sections. In section 1, we report on the rise of the network concept in "innovation studies" and, in particular, on its tertiarization and de-marketization dynamics. We also examine how the concept of innovation network relates to that of innovation regime. Based on a database of 24 PSINSIs cases collected in different European countries, section 2 is devoted to the presentation and discussion of a number of empirical results relating to the morphology, objectives and dynamics of PSINSIs. The last section builds on this empirical analysis and on the discussion of innovation regimes carried out in section 2, to identify, discuss and enrich the different learning and social innovation regimes within which the different identified PSINSIs function.

### 1. Innovation networks and innovation regimes

This section is devoted to two related objectives. The first is to give a brief account of the rise of the notion of innovation network in innovation studies and in particular of its tertiarized and

Co-VAL "Understanding value co-creation in public services for transforming European public administrations"

de-marketized forms, which are of interest here. The second is to discuss how the concept of innovation network is linked with the neo-Schumpeterian notion of innovation regime.

## 1.1 From traditional innovation networks to PSINSIs

The notion of innovation network has become "common knowledge" in the field of "innovation studies". The reasons for the success of this concept include its simplicity (the network is nothing more than a set of nodes and links), its advantages over the market and hierarchy as a mode of coordination, its suitability for the formal tools of social network analysis, its close relationship with other conceptualizations of economic theory (in particular innovation systems and eco-systems in their different variations).

However, the innovation networks in question are above all *technological innovation* networks, carried by *manufacturing firms*, even if they may collaborate with public bodies (universities, research laboratories) and be supported, in different ways (institutional, financial...), by public administrations playing a meta-governance role (see Table 1). Thus, the ideal-types of these traditional innovation networks are, on the one hand, the so-called triple helix (Etzkovitch and Leydesdorff, 2000), public-private collaboration involving firms, universities and government agencies and, on the other hand, the technological alliance, private-private collaboration between competitors or partners in the supply chain. The traditional innovation networks that overwhelmingly dominate the literature are thus characterized by a double industrialist and technologist bias.

Compared to traditional innovation networks focused on manufacturing industry and technological innovation, networks focused on *market services and service innovation*, and even more so networks focused on *public services and public service innovation*, have been the object of a relatively scarce literature (*cf.* Desmarchelier *et al.*, 2020). PSINSIs, the innovation networks which we discuss in this article are special cases of the latter. They are networks focused on social innovation within public services. The types of agents involved in a PSINSI are represented by the formula MF-SF-(**PSO**)-**TSO-C**, which means that the three key actors (shown in bold and enlarged letters) are public service organizations (PSO), third sector organizations (TSO) and citizens (C). The PSOs are shown into brackets, albeit in bold and enlarged characters. This means that, when they are present, they play a central role in the network, but that they may be absent in some cases. Indeed, it is not uncommon for a PSINSI to be set up because of the failure of the public actor.

Table 1: A typology	of innovation networks
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Type of network	Type of agents*	Role of public	Main target in	Main target in	
		agent (public	terms of	terms of sector	
		administration)	innovation		
Traditional	MF–SF–PSO–C	- Mainly support,	Technological	Manufacturing	
innovation		facilitator	innovation	industry	
network (TIN)				-	
Market service	MF-SF-PSO-TSO-C	- Mainly support,	Technological and	Market services	
innovation		facilitator	non-technological		
network (MIN)			innovation		
Public service	MF-SF-(PSO)-TSO-C	- Mainly co-	Technological and	Public services	
innovation	innovation		non-technological		
network (PSIN)		- Also support,	innovation		
		facilitator			

Public	service	MF-SF-(PSO)-TSO-C	- Mai	nly	co-	Social innovation	Public services
innovation	n		productio	on			
network	for		- Also	sup	port,		
social inn	ovation		facilitato	r			
(PSINSI)							

\*MF = Manufacturing Firm. SF = Service Firm. PSO = Public Service Organization. TSO = Third Sector Organization. C = Citizen, User (Lead-Users), Consumer.

#### 1.2 The place of networks in regimes

Following Schumpeter's analysis, evolutionary theory considers two innovation regimes: the *entrepreneurial* regime and the *routinized* regime (Winter, 1984). The entrepreneurial regime (Schumpeter Mark 1) is based on the heroic image of the individual entrepreneur, who introduces new "productive combinations". These combinations are radical and discontinuous changes that emerge as the entrepreneur seizes an opportunity through exploration (March, 1991). Thus, the entrepreneurial regime describes industries in their infancy – what would nowadays be known as start-ups. However, the routinized regime (Schumpeter Mark 2) characterizes large firms operating in mature environments. In such a regime, innovation is more continuous and incremental, and falls within the scope of a logic of exploitation (March, 1991). The literature has explored the existence of a third regime (interactional or network innovation regime, sometimes anachronistically called Schumpeter Mark 3), which describes an open, multi-stakeholder innovation model (Gallouj, 2002a and 2002b). Over time, the three regimes do succeed each other - but they tend to overlap and coexist, rather than being substitutes for one another (see Figure 1).

However, in analyzing PSINSIs, we take a different position from the one described above, insofar as we consider the interactional or network innovation model as a mode of innovation organization that can fit into the other two regimes, rather than as a third regime in its own right. Thus, our hypothesis is that the dynamics of innovation networks (in this case, PSINSIs) do not in itself constitute a specific regime, but that an innovation network (a PSINSI) can be part of either an entrepreneurial or a routinized regime. Thus the empirical material collected in the Co-VAL database (see next section) makes it possible, with some analytical adjustments, to associate PSINSIs with various innovation and learning regimes, but also to enrich the content of these regimes in particular by identifying sub-categories within them and interactions between these sub-categories.

Figure 1 : From networks as an innovation regime towards networks as an arena for innovation regimes



#### 2. The PSINSIs of the COVAL database

Our discussion of innovation regimes at work in PSINSIs is based on the results of extensive empirical work in several European countries. In this section, we present the research methodology and a number of empirical results related to the morphology, objectives and dynamics of PSINSIs, which we will use to support the variety of innovation regimes or subregimes at work in PSINSIs and their possible interactions.

### 2.1. Methodology

This research is based on 24 in-depth PSINSIs case studies carried out within the European COVAL project (see Table 2). These case studies, which were the object of national reports (Fuglsang *et al.*, 2019; Merlin-Brogniart, 2019; Révész and Rosta, 2019; Magnussen and Rønning, 2019; Peralta, 2019) cover five countries (Denmark, France, Norway, Hungary and Spain) and five societal areas that are particularly problematic and likely to give rise to social innovations in the context of multi-agent collaboration, namely: 1) elderly issues, 2) education issues, 3) minorities issues, 4) long-term unemployment, 5) environmental protection.

The collection of information on the identified cases was based on a comprehensive survey (more than 100 recorded and transcribed interviews) carried out by the different partners among the main stakeholders of the selected PSINSIs, over a period from late 2018 to early 2019 (Fuglsang *et al.*, 2019; Merlin-Brogniart, 2019; Révész and Rosta, 2019; Magnussen and Rønning, 2019; Peralta, 2019). Other sources of information were also mobilized: existing grey literature, stakeholders' websites, videos on Youtube or Tedex conferences, focus group discussions, visits to facilities.

The 24 case studies consisted in collecting data on the following five key dimensions: 1) type of social innovation/type of innovation process, 2) type of innovation network (mode of formation, mode of functioning, evolution in time, evolution in space), 3) drivers/barriers, 4) institutional factors, 5) impacts and performance. We sum up here a number of cross-cutting results regarding in particular the first two key dimensions.

PSINSI case	Social issue	Description of social innovation			
Denmark					
DK1: Cycling	Elderly issues	Rickshaw rides for elderly people living in nursing homes or receiving home care,			
Without Age (CWA)		aimed at bringing them out of isolation.			
DK2: Grennessminde	Education, residential	New educational, vocational training and residential services for mentally disabled			
	accommodation and	young people + platform for social enterprises providing new services.			
	disability				
DK3: Mind Your	Education,	Support for entrepreneurship projects for young people in deprived neighborhoods.			
Own Business	unemployment,	Development of their professional and social skills.			
(MYOB)	minorities				
DK4: Bybi (Citybee)	Social inclusion,	Rental of beehives to create social connections and preserve the environment, training			
	environmental issues	in beekeeping.			
DK5: E-Bro and	Long-term	Reorganization by a municipality (a job center) of how to find flexi-jobs for the long-			
JOBiNTRA	unemployment	term unemployed, using an IT platform (JOBiNTRA) and changing the organizat			
		of work.			
France					
FR1: MAIA method	Elderly issues	A method designed to improve care for seniors, based on the integration of support			
		and care services, strategic and tactical coordination, and management of complex			
		cases (by a case manager).			

Table 2: PSINSIs in the Co-VAL database

FR2: Zero Long-Term	Long-term	A project aimed at reducing long-term unemployment by involving the unemployed in
Unemployed	unemployment	the creation of their own jobs, within the framework of Employment-Based
Territory (TZCLD)	1 5	Enterprises, which can be nodes of other networks.
FR3: The Booster	Education (school	The Booster program aims to bring minors in difficulty back to school by alternating
Program	dropout)	<i>community</i> civic service with high school refresher courses
Tiogram	uropour)	commanuty ervice service with high school renesher courses.
FP4: The Melting	Minorities	Integration of groups targeted by discrimination (Rome, then refugees) by means of
Potes Program	winormes	acomputity giving convige (mixing Dome and Erangh people)
Foles Flogram	Environmental income	New form of accounting hotman sitisms and the Colling municipality to develop
FK5: La Fabrique	Environmental issues	New form of cooperation between cluzens and the Sality municipality, to develop
Saillysienne (The	(mainly)	projects of community interest at the municipal level.
Saillysian Factory)		
Hungary		
HU1: Járókelő	Urban issues	A computer platform that allows citizens to report road problems and track their
(passer-by)		resolution.
Association		
HU2: Esélykör (Circle	Disability care	Integrated care (regarding employment in particular) of the disabled by NGOs, in the
of Opportunity)	Long-term	city of Székesfehérvár.
	unemployment	
HU3: CédrusNet	Elderly care	Programs and projects for and with the elderly in Kecskemét city.
(CedarNet)	Adult education	8 1 5 5 5
HU4: No Bad Kid -	Roma minorities	A new educational service designed to meet the integration needs of Roma children
Pressley Ridge	Education	The word of a contract of the activity of the second of th
Hungary Foundation	Education	
HUI5: PAGéze Public	Pomo minoritios	A gat of conviges (montoring, education, local advice, retailing activities, etc.) intended
Banafit Association	Education	A set of services (memoring, education, legar advice, retaining activities, etc.) intended
Benefit Association	Education	to help integrate the Roma community.
	Long-term	
	unemployment	
Norway		
NO1: Flexible relief	Elderly people living	Respite system for family caregivers of elderly people living with dementia, relying on
for dependents	with dementia, and	volunteers and supported by a computer platform, to ensure coordination.
	their families	
NO2: Strength of	Long-term	Connecting two existing networks: one for long-term unemployed drug-addicted men,
connecting vulnerable	unemployment	the other for long-term unemployed immigrant women.
groups	Minorities, drug	
	addicts	
NO3: Refugees as	Minorities	Method of integrating refugees in rural municipalities, as a way of combating rural
resources in rural		desertification.
areas		
NO4: Drive For Life	Vulnerable youth	Social integration of vulnerable young people by offering closed-circuit driving lessons
	, ameracie yeaan	and hasic training in car renair
NO5: Pa astablishing	N 1 11 1 111	and basic daming in car repair.
NOJ. Re-establishing	Mantal disability	Care for people living with dementia and respite for care givers via the creation or re-
paraonal naturarka for	Mental disability	Care for people living with dementia, and respite for care givers, via the creation or re-
personal networks for	Mental disability	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia.
personal networks for people living with	Mental disability	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia.
personal networks for people living with dementia	Mental disability	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia.
personal networks for people living with dementia Spain		Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia.
personal networks for people living with dementia Spain ES1: Library of San	Excluded	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia.
personal networks for people living with dementia Spain ES1: Library of San Fermin project	Excluded citizens (minorities):	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building
personal networks for people living with dementia Spain ES1: Library of San Fermin project	Excluded citizens (minorities): revitalization of	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces.
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personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops	Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of
personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops project	Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority children	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of traditional music from around the world to create musical collages. It uses new
personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops project	Mental disability Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority children	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of traditional music from around the world to create musical collages. It uses new technologies to promote intercultural dialog, knowledge of traditional music and
personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops project	Mental disability Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority children	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of traditional music from around the world to create musical collages. It uses new technologies to promote intercultural dialog, knowledge of traditional music and collective creation.
personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops project ES3: Alas Foundation	Mental disability Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority children Disabled elderly	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of traditional music from around the world to create musical collages. It uses new technologies to promote intercultural dialog, knowledge of traditional music and collective creation. Facilities for assisting mentally disabled persons in old age.
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personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops project ES3: Alas Foundation project ES4: The Plan for	Mental disability Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority children Disabled elderly Youth professional	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of traditional music from around the world to create musical collages. It uses new technologies to promote intercultural dialog, knowledge of traditional music and collective creation. Facilities for assisting mentally disabled persons in old age.
personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops project ES3: Alas Foundation project ES4: The Plan for Professional	Mental disability Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority children Disabled elderly Youth professional education and	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of traditional music from around the world to create musical collages. It uses new technologies to promote intercultural dialog, knowledge of traditional music and collective creation. Facilities for assisting mentally disabled persons in old age. Plan to facilitate access to employment for citizens of the La Rioja region.
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personal networks for people living with dementia Spain ES1: Library of San Fermin project ES2: Antropoloops project ES3: Alas Foundation project ES4: The Plan for Professional Education and Employment of La	Mental disability Excluded citizens (minorities): revitalization of deprived neighborhood Education of minority children Disabled elderly Youth professional education and unemployment	Care for people living with dementia, and respite for care givers, via the creation or re- creation of networks around those living with dementia. Design of a new type of library and its uses, with multiple stakeholder participation in setting up 1) the library model (types of services desired), 2) the library building (spaces), and 3) the surrounding public spaces. An arts education program for "minority children" that remixes fragments of traditional music from around the world to create musical collages. It uses new technologies to promote intercultural dialog, knowledge of traditional music and collective creation. Facilities for assisting mentally disabled persons in old age. Plan to facilitate access to employment for citizens of the La Rioja region.

Source: After Fuglsang *et al.* 2019; Merlin-Brogniart, 2019; Révész et Rosta, 2019; Magnussen and Rønning, 2019; Peralta, 2019

### **2.2 The structure of PSINSIs**

The structure of PSINSIs can be addressed by the nature of the agents involved in the collaboration and their number (i.e. the size of the PSINSI).

As outlined in paragraph 1.1, the theoretical structure of PSINSIs is represented by the formula: MF-SF-(**PSO)-TSO-C**. Table 3 details the concrete actors that illustrate these general categories in some of the PSINSIs of the database.

 Table 3: Nature of actors and size of PSINSIs at the time of the investigation (examples)

		7
PSINSI case	Size on t (- 2018-2019)*	Participants nature [MF, SF, PSO, TSO, C1, C2] at the time of empirical investigation (late 2018-early 2019 unless otherwise specified). Non-exhaustive list
DK1	L	Copenhagen municipality [PSO], many municipalities in Denmark and other countries [PSO], Cykling Uden Alter-CUA and Cycling Without Age-CWA [TSO], many care centers [PSO], rickshaw manufacturers [MF], volunteers [C], many manufacturing and service firms such as AirBnB, Goodwings, GSK, Zindesk [MF and SF], elderly [C1]
FR5	S	Sailly-Les-Lannoy municipality [PSO], schools of Sailly-Les-Lannoy [PSO], citizens of Sailly-Les- Lannoy [C2], citizens of neighboring cities [C2], various associations [TSO], professionals [SF], network of other national cities [PSO], network of other foreign cities (Kirnetown) [PSO], Les Incroyables Comestibles Association [TSO]
HU1	L	Járókelő association [TSO], For profit companies (e.g. Telecom, JC Decaux) [MF + SF], Public service providers (e.g. public transport, waste management) [PSO], local authorities [PSO], Biking associations [TSO], Sponsors (e.g. SEEDS program of ERSTE foundation, Invitech) [TSO and SF], Citizens [C1], etc.
NO2	М	Salvation Army [TSO], Norwegian Labor and Welfare Administration [PSO], municipality (several departments) [PSO], manufacturing and service firms [SF + MF], the Creation café [TSO], long-term unemployed men with drug problems [C1], long-term unemployed immigrant women [C1], etc.
ES2	S	Antropoloops group [TSO], Carasso Foundation [TSO], San Jose Obero primary school in Seville [PSO], Instituto de la cultura y las artes of the Seville municipality [TSO], Zemos 98 [TSO], students [C1], families [C1], etc.

\* Size (not including type C1 users/citizens): Small (S) : fewer than 10. Medium (M) : from 10 to 100. Large (L) : more than 100. The reference year t covers the period end of 2018-2019. \*\* MF = Manufacturing Firms, SF = Service firms, PSO = Public Service Organizations, TSO = Third sector Organizations, C1= Type 1 citizens, not involved in social innovation, C2 = Type 2 citizens involved in social innovation

Source: After Fuglsang *et al.* 2019; Merlin-Brogniart, 2019; Révész et Rosta, 2019; Magnussen and Rønning, 2019; Peralta, 2019

The general structure of the PSINSI under consideration (the nature of its actors) is not fixed. It evolves over time. It may, for example, be that at the beginning of the life cycle, the public administration is absent from the network (which is then a private-private partnership), but that, in its growth or maturity phase, the network integrates a public administration and thus becomes a public-private partnership. Table 3 does not take this type of dynamic into account. It is only a snapshot at the time of the empirical investigation (late 2018-early 2019) of the topography of PSINSIs which are at different stages of their life cycle. Established in 2017 or 2018, some PSINSIs (such as FR4, FR5, NO2 or ES2) have only just been born. Others have reached their growth or maturity phase and are disseminated, for some of them, at different levels of spatial (including global) scale. These include DK1, DK2 and ES3 created respectively in 2012, 1977 and 2008, FR2 pre-tested in 1995 and operationalized in 2011 (see Table 4). Although a number of PSINSIs have emerged without public administration, Table 3 does not include any case without public administration. Overall, although the literature highlights the existence of public-public and private-private PSINSIs (Desmarchelier et al., 2020), at the moment of the empirical investigation, the PSINSIs envisaged are all public-private networks. They therefore associate public service organizations of various types and private agents (mainly citizens or associations and foundations, but also manufacturing and service firms).

The size of a PSINSI can be measured either by the number of agents involved in the network or by the number of links between these agents. Here we use the number of actors. However, drawing the PSINSI boundary is not an easy task. This drawing difficulty is particularly apparent at two levels: 1) voluntary firms (for example, those providing jobs for people in difficulty), whose number is indeterminate, and which PSINSI promoters generally regularly solicitated; 2) citizens [C], whose identification may be problematic. The question is therefore which types of citizens/users and of volunteers should be included in the network?

We decided to exclude from the scope of PSINSIs, citizens who are just recipients of the service provided (C1 type citizens) or simple citizens who are co-producers of the services provided, as well as volunteers (individuals or firms). Thus, only citizens involved in the initiation or implementation of the network (C2 type citizens) are taken into account. On this basis, PSINSIs are considered to be large, when they bring together more than 100 agents, medium, when they include from 10 to 100 agents, and small when they account for fewer than 10 agents.

## 2.3. PSINSIs formation

PSINSIs can be formed *spontaneously* or in a *planned* way. Planned PSINSIs are initiated by an agent who will seek to convince other agents to join the collaboration system. Spontaneous PSINSIs are, for their part, the result of a self-organized process in which independent agents, facing the same problem, in the same territorial context, converge in an unplanned way in a system of collaboration.

The empirical identification of planned PSINSIs is easier than that of spontaneous PSINSIs, if only because the initiating agent tends to produce a discourse about himself, sometimes even a mythology (*cf.* previous paragraph), which facilitates the visibility of the PSINSI. This may explain why, even if some aspects of self-organization may be visible in some cases (e.g. ES1, ES3, FR3, FR5, HU2)<sup>2</sup>, all cases in the COVAL database are planned PSINSIs (see Table 4).

A planned PSINSI can be, in theory, initiated by a public organization (o), or, in the private sphere, either by a private organization (o) or an individual/citizen (i). Table 4 shows that, in 10 cases, the initiator of the PSINSI is a public organization, in 8 cases it is a private organization (in all cases here third sector organizations: associations, foundations, etc.) and in 6 cases, it is an individual citizen.

PSINSI case	Date of initiation		Mode of form	ation (ou d	e reconfigu	ration)	Initial mode of functioning		Evolution of the mode of functioning t0> t			
	/creation	Spontane	Planned	Private	Initiator	Public Initiator		-				
		ous		i	0	0	Н	V	H->H	H->V	V->V	V->H
DK1	2012		Х	Х			Х			Х		
DK2	1977		Х	Х			Х			Х		
DK3	2010		Х		Х		Х			Х		
DK4	2009		Х	Х			Х		Х			
DK5	2012		Х			Х		Х				Х
FR1	2008		Х			Х		Х				Х
FR2	(1995)		Х		Х		Х		Х			
	2014											
FR3	2012	(X)	Х		Х		Х		Х			
FR4	2018		Х		Х		Х		Х			
FR5	2017	(X)	Х			Х	Х		Х			
HU1	2012		Х	Х			Х		Х			
HU2	2016	(X)	Х		Х		Х		Х			
HU3	2016		Х	Х			Х		Х			
HU4	2013		Х			Х	Х		Х			
HU5	2011		Х			Х	Х		Х			
NO1	2016		X			Х	X		Х			
NO2	2018		Х		Х		Х		Х			
NO3	2015		Х			Х	Х		Х			
NO4	2011		Х	Х				Х			Х	

### Table 4 : Modes of formation and functioning of PSINSIs

<sup>&</sup>lt;sup>2</sup> Thus, in the cases of HU2/Esélykör (Circle of Opportunity) and FR5/La Fabrique Saillysienne/The Saillysian Factory, the PSINSI idea emerged spontaneously during public events (a forum where the main stakeholders met in the case of HU2, a debate following the screening of a film in a municipal hall in the case of FR5).

NO5	2013		Х			Х	Х		Х			
ES1	2015	(X)	Х			Х	Х		Х			
ES2	2017		Х		Х		Х		Х			
ES3	2008	(X)	Х		Х			Х			Х	
ES4	2016		Х			Х		Х			Х	
· · · · · · 1												

i = individual, o = organization, H = horizontal, V = vertical

### 2.4 Modes of functioning of PSINSIs

Regarding its mode of functioning, it is considered that, in theory, a network can be operated in two different modes: horizontal or vertical. The simplicity of this theoretical distinction should not lead to underestimate the issues in determining/defining the mode of functioning of some PSINSIs.

First of all, it must be stressed that the operating mode is not necessarily homogeneous within a PSINSI. For example, relations may be horizontal with the main stakeholders in the network, but vertical with the users, especially if they are vulnerable users (see for example, HU2, NO1). Similarly, especially when they are large, networks may contain sub-networks operating in different ways. For example, in DK2, the relationship between the Grennessminde Foundation and manufacturing and service firms providing traineeships for young people in difficulty is horizontal in nature. In contrast, the relationship between Grennessminde and the government is probably more vertical (top-down). It is a subcontracting relationship in which the government is the principal.

In order to overcome this difficulty in assessing how PSINSIs operate, we will only take into account users/citizens (C2 type citizen) who are actively involved in the network. Furthermore, we will ignore any differences in operating mode within PSINSI sub-groups. In other words, if we find, for example, a horizontal mode of operation within a PSINSI component, but a vertical mode of operation between this component and the other PSINSI components, we will consider that globally the network operates vertically. Overall, at the moment of the empirical investigation, 18 PSINSIs were operated in a horizontal mode, and 6 in a vertical mode.

It should not be forgotten that the operating mode is evolving over time. The analysis of the "narratives" of the different cases made it possible to highlight the initial mode of operation (at the time the network was set up) and the way in which it has evolved over time. Overall, Table 4 shows that 19 PSINSIs initially operated in a horizontal mode and 5 in a vertical mode. 3 of the originally horizontal PSINSIs have evolved towards a vertical mode of operation. The first case is DK1, which originally operated in a bricolage and horizontal mode. In order to cope with its success and the usurpation of its logo and name by other networks, it moved to a vertical mode of operation by setting up two coordination structures (associations), one (AUC) at national level (for the Danish network), the other (CWA) for the international network. The same applies to DK2 and DK3, which initially operated horizontally, but in which the founding associations now play a central role, reflecting a vertical mode of operation. These are DK5 and FR1. All the others have not changed their mode of operation over time.

## 3. PSINSIs innovation regimes: a neo-Schumpeterian perspective

As pointed out in section 1.2, we do not see PSINSIs as an expression of a third neo-Schumpeterian innovation regime complementing entrepreneurial and routinized regimes, but as an analytical category that can emerge within the scope of both regimes. The PSINSIs enshrined in these two regimes are distinguished in particular by their age, their size, the number of services (social innovations) they implement, the nature of their initiator and their raison d'être. These two regimes are not homogeneous and can themselves encompass different modalities.

## 3.1 PSINSIs under an entrepreneurial regime

The PSINSI established under an entrepreneurial regime is a young network. It therefore consists of few actors. These are the *initial entrepreneurial collective*, i.e., in the case of a planned network, the initiator and the first stakeholders. It is often a mono-service network, i.e. focused on a single social innovation and is always initiated by a "socially conscious" *individual private agent*, often a "fiery soul" or someone whose personal history is a driver of the social innovation at work. An entrepreneurial PSINSI is established in response to the disinterest of organized institutions, such as existing market sector companies and third sector organizations, as well as in response to failures of the state.

PSINSI case	Date of initiation	Size on t (late		Innovation regimes of PSINSI in t (unless otherwise stated)							Spatial expansion			
	/creation	2018	Eı		Routinized									
		early 2019)	Social bricoleur	Social constructi onist	Social engineer	Institut ional entrepr	Standa rd/can onique	intrapr eneuri al	extrapr eneuri al	Spin- off	None	Loc al	Nation al	Inte rnat iona
						eneuri at	1							1
DK1	2012	T	<b>X</b> (t0)		Y(tn)							1		v
DK1	1077	L	X (t0)	<b>V</b> (t1)	A( ui)		V (tr)						v	л
DK2	2010	L	A (10)	A (11)	-		л (ш)			v			л V	
DK3	2010	M	-	v	-					Λ		v	л	
DK5	2009	M		Λ				X (t0)		X(tn)		Λ	x	
Ditt	2012							11 (10)		M( 111)				
FR1	2008	L				Х							Х	
FR2	(1995) 2011	L					Х		Х				Х	
FR3	2012	L					Х						Х	
FR4	2018	М					Х						Х	
FR5	2017	S							Х			Х		
HU1	2012	L		Х									Х	
HU2	2016	М				Х						Х		
HU3	2016	М		Х								Х		
HU4	2013	М					Х					Х		
HU5	2011	М								Х		Х		
		1					1						1	
NO1	2016	S				Х					X (pil)			
NO2	2018?	М					Х		Х		X (pil)			
NO3	2015?	М					Х				X (pil)			
NO4	2011	M		Х										Х
NO5	2013	М							Х		Х			
				1	1			r	r					r
ES1	2015	M				X						Х		
ES2	2017	S				X								
ES3	2008	M							Х				Х	
ES4	2016	M					Х					Х		

## Table 5: Innovation regimes and spatial expansion

## Three types of entrepreneurial PSINSIs: bricoleurs, constructionists, engineers

In applying the typology of social entrepreneurs put forward by Zahra *et al.* (2009) to innovation networks, three types of entrepreneurial PSINSIs (i.e. operating under an entrepreneurial regime) can be distinguished: "social bricoleur PSINSIs", "social constructionist PSINSIs" and "social engineer PSINSIs". These differ in terms of their "search processes", i.e. by the "way they discover social opportunities" (in other words, by the nature and scale of the problem that gives rise to these networks), as well as in terms of the scope of the social innovation they

implement (its impact on the broader social system), and in terms of how they mobilize the resources needed for the social innovation, and the origin of these resources.

The entrepreneurial activity of "social bricoleur" PSINSIs has its origin in "small-scale local social needs". The social bricoleurs addresses local problems which are "corrective problems" in Kubr's sense of the term (Kubr, 1988), i.e. problems for which innovation seeks to rectify a concrete and problematic situation. They are highly integrated into their own local environment, whose problems they know intimately and where they find the resources necessary for social innovation. Resources for innovation are mobilized through "bricolage" (improvisation, small-scale tinkering), rather than in an organized and systematic way. The resulting social innovation is therefore limited in scope and it falls within a weak and localized innovation trajectory. It solves local problems using local resources, and does not a priori lay claim to generalization (though this does not prevent its spread in some cases).

The activity of "social constructionist" PSINSIs is based on a more systematic detection of broader social problems neglected by both market and public sectors. The problems addressed here are less "corrective" than "progressive" in Kubr's sense (Kubr, 1988), i.e. problems that are still emerging but that are expected to worsen in the long term and for which solutions should be anticipated. The "social constructionist" PSINSI exploits opportunities and responds to (public) market failures. Its activity is organized, planned and systematic as it aims to devise widely scalable solutions that will meet growing needs and unsatisfied demand. In this case the resources mobilized are not necessarily exclusively local.

Within "social engineer" PSINSIs, actors identify much broader, systemic problems than those detected by "social constructionist" PSINSI. This type of PSINSI addresses these problems by implementing revolutionary changes that disrupt the social system. They fall within the scope of powerful social innovation trajectories. They are the most Schumpeterian of the PSINSIs evolving under an entrepreneurial regime, insofar as they disrupt the social structure and generate a process of "creative destruction" that destroys existing institutions and replaces them with new ones. This form of the entrepreneurial regime, often expressed at national or global level, can be associated with what Kubr (1988) calls "creative" problems, i.e "problems whose aim is to provide a totally new and better solution, without there being any real problem to be solved a priori".

## Entrepreneurial PSINSIs in the Co-VAL database

Zahara *et al.* (2009) hypothesize that every social entrepreneur can be described by one of the abovementioned types (bricoleur, constructionist or engineer). According to them, the Grameen Bank founded by Muhammad Yunus is an illustration of the "social engineer" model of entrepreneurship. Our application of the typology to the cases of the Co-VAL database (see Figure 2 and Table 5) leads us to question the hypothesis of a systematically univocal relationship between cases of PSINSIs and types of entrepreneurship. In some cases, the newly-formed PSINSI under consideration may fall immediately and unmistakably within the scope of a given type - but in others, the nature of the PSINSI can change very quickly.

In other words, while some PSINSIs can be described from the outset, at the moment of their creation, as clear "social bricoleurs", "social constructionists" or "social engineers" (the Co-VAL database does not provide us with any cases of this last type), other situations can be considered in which a PSINSI evolves relatively fast (in the very short term) from a "social bricoleur" configuration to a "social constructionist" or "social engineer" configuration. There

are also situations in which a PSINSI having initially evolved under a "social constructionist" configuration moves toward a "social engineer" configuration. These evolutions are illustrated in Figure 2 (which also includes examples, where available, from the Co-VAL database).



Figure 2 : The links between different forms of social entrepreneurship

The Co-VAL database provides four cases of PSINSIs that were developed from the outset in a "social constructionist" form. The first is HU3, a network dedicated to the inclusion of elderly people in the community through their involvement in a number of activities. The concept was formulated, "built" from the outset, in a systematic way, by Erika Sárközy, a sociologist of aging, who tested it in a local context (Kecskemét municipality), with a view to generalizing it. The second case is DK4. This PSINSI, which makes beehives available to organizations, was initiated by a follower of the feminist philosopher Donna Haraway. It is based on detecting an important, generic (ecological and philosophical) social need, and it meets this need by means of a thoughtful (conceptually based) and scalable solution. The third case NO4 is a PSINSI that has been implemented in a thoughtful, planned and systematic way by a European rallycross champion. In collaboration with his wife, he developed a formalized protocol for taking care of "dropped-out" young people with the expectation that it could be used as an implementation and certification tool for other leaders of local closed-circuit driving clubs. The last case is HU1, the network was founded by three individuals, who drew inspiration from experiences abroad, in particular from "Letter to the Mayor/Odkaz pre starostu" - a platform run by a Slovak NGO (the Slovak Governance Institute). In creating HU1, these social entrepreneurs sought to fill a gap (a latent need) - not by tinkering, but by adapting a system already existing elsewhere to the Hungarian reality. They began by testing it in a single municipality, with the intention of spreading it throughout Hungary. In accordance with the definition of "social constructionist" entrepreneurship, all of these cases were intended to be generalized and disseminated as widely as possible (see Table 5). NO4, created in 2011, has already been disseminated internationally, while HU1, created in 2012, has achieved national reach. The other two cases are disseminated only locally, although it is still early days for HU3, which was created in 2016.

The Co-VAL database does not, however, provide us with PSINSIs cases that can be univocally associated with the "bricoleur" or "social engineer" configurations, for reasons that differ for each configuration. Insofar as "social engineer" PSINSIs concern revolutionary changes (according to Zahara *et al.* (2008)), it is understandable that these are not common. Conversely, "social bricoleurs" PSINSIs are particularly numerous. However, their focus on local micro-problems to which they provide modest, small-scale solutions limits their visibility and thus the ease with which academic work is able to identify them and report on them. They gain visibility only when, having recognized a broader need, their promoters adopt a more systematic approach and move away from the ad hoc bricolage configuration to a social constructionist or social engineer configuration.

DK1 (Cycling Without Age) is however considered to have initially been a "social bricoleur" PSINSI. This case describes how one person organized an offer of rickshaw rides to senior citizens in retirement homes. The network's starting point was the fortuitous observation, at local level, of a senior sitting on a bench close to his retirement home. The first activities consisted, using a bricolage method, of securing the senior's consent, then asking the director of the retirement home for permission, before renting a rickshaw. The initiator carried out the first rickshaw rides himself. The search for resources was undertaken at a local level (mobilizing a friend who was a municipal official in Copenhagen). Yet this network and the corresponding social innovation quickly became a worldwide movement (present in 40 countries and more than 1200 locations, in 2018), that can be integrated into the "social engineer" regime. Against this reasoning, it is possible to argue that at the time of the empirical investigation (2018), the network had become institutionalized, and that, having ceased to operate under an entrepreneurial regime, it was now under the routinized regime of a wellestablished organization (network) (see § 3.2). However, since the network initiation was, back in 2018 (date of the empirical investigation), relatively recent (2012), we consider the PSINSI to have been still in a phase of entrepreneurial consolidation.

DK2 (Grennessminde) was founded in 1977 by a "fiery soul", driven by her personal history (disabled sister) and wanting to solve her own problem. This PSINSI can be considered to have initially functioned under the "social bricoleur" regime. However, the local micro-problem was very quickly identified as a scalable problem demanding external resources. This drove a shift from a "bricolage" entrepreneurial regime to a "social constructionist" entrepreneurial regime. As we will see in § 3.2, this PSINSI now operates under a standard routinized regime.

In the literature, the entrepreneurial regime is associated with radical innovation. Theoretically, this hypothesis seems inconsistent with the idea of the existence of a "bricolage" social entrepreneurship. The cases in the Co-VAL database (regardless of the expression of the entrepreneurial regime under consideration) do not validate this hypothesis. Indeed, simple innovations (which may already exist elsewhere) may be the object of networks evolving under the entrepreneurial regime. From this point of view, the social entrepreneurial regime differs from the traditional entrepreneurial regime.

## 3.2 PSINSIs under a routinized regime

The PSINSI operating under a routinized regime does not rely on (an) individual actor(s), but, although individual actors may play an important role, on an existing public or private organization that will establish a new network or on organizations that are already networked.

Thus, the routinized dimension of this regime reflects the endogenization of entrepreneurship and innovation spirit in a given organization and/or multi-organizational system. Depending on whether the network already exists or not and on the type of innovation favored or the way the social innovation process is organized, five different configurations of the routinized regime can be distinguished: the 'institutional entrepreneurship' routinized PSINSI, the standard or canonical routinized PSINSI, the intrapreneurial routinized PSINSI, the extrapreneurial routinized PSINSI, the spin-off routinized PSINSI (Figure 3 and Table 5). Although these configurations are presented here separately, they may manifest themselves together in the same network.

#### Institutional entrepreneurship routinized PSINSI

The designation of this configuration may seem inconsistent and contradictory, as it combines qualifiers ("routinized" and "entrepreneurship") describing two different innovation regimes. What differentiates this first expression of the routinized regime from the other four is that, in this configuration, the PSINSI does not initially exist. Rather, it is initiated by one (or more) existing organization(s) (reflecting the routinized dimension of the traditional Schumpeter Mark 2), which behave(s) like the individual entrepreneur described under the entrepreneurial regime (Schumpeter Mark 1). This (or these) organization(s) seek(s) to develop an idea by involving other stakeholders. It is this entrepreneurial behavior that sometimes leads, in the literature, to consideration of this particular configuration of the routinized regime as an expression of the entrepreneurial regime (Bartlett and Dibben, 2002). For our part, we reserve the entrepreneurial regime expression exclusively for PSINSIs initiated by individual citizens.

The following cases in the Co-VAL database fall into this category of institutional entrepreneurship routinized PSINSIs:

- FR1 (MAIA method). Though its origins lie in the work of two researchers at the Georges Pompidou European Hospital (Paris), this PSINSI, which aims to facilitate care for sick elderly people, is supported by existing public institutions.

- HU2 (Esélykör/Circle of Opportunity). This PSINSI was founded in 2016 by eight NGOs operating in the field of care for disabled people in the Székesfehérvár municipality. Its aim is to coordinate and synchronize operation of the different NGOs, to enable effective collaboration with local government and business.

- ES1 (Library of San Fermin project) is a network that draws on well-established public and private organizations.

#### Standard or canonical routinized PSINSI

Unlike the previous type of PSINSI, though similarly to the following three types, this standard or canonical routinized PSINSI is a network that has been existing for some time. It could have been created within the framework of an entrepreneurial regime. In any case, the innovation activity is distributed across various organizations. In this way, it is endogenous to the network itself rather than to a given organization, as in the case of the standard Schumpeter Mark 2. This PSINSI is qualified as standard or canonical, because it is the application of the traditional Schumpeter Mark 2 to the network. It is, most often, large, having had time to spread in space (in different ways). Its usual activity is to produce one or more well-identified service(s) - it is often multi-service. However, it includes a routine/endogenous innovation function/activity. The social innovation carried out by the routinized network is incremental, resulting from exploitation rather than exploration. It aims either to meet new problems in the historical field of the network's activity, or to improve existing services and/or how they are delivered, as well

as the organization that hosts them. It is either "progressive" in Kubr's sense of the term (Kubr, 1988), or "reactive", for example, to institutional change (a new law on training for the disabled, for example, as in DK2).

The following cases belong to this first configuration of the routinized regime:

- DK2 (Grennessminde). As stated above, at the time of its creation (1977), the network fell within the scope of the entrepreneurial regime in its social bricoleur form (Agnete Grenness' efforts to obtain better care for her disabled sister). By the time of the empirical investigation (2019), Grennessminde was a routinized, canonical-type PSINSI based on collaboration between well-established partner organizations, and multiplying the types of services provided to young disabled people.

- FR2 (Zero Long-term Unemployed Territory), in its initial experimentation, relied on wellknown and well-established existing associations such as ATD Quart Monde and Emmaüs.

- HU4 (No Bad Kid - Pressley Ridge Hungary Foundation). This PSINSI was set up through the collaboration of a number of well-established institutions, in order to address the educational problems of Roma children in a deprived area of Kecskemét city.

## Intrapreneurial routinized PSINSI

A routinized PSINSI operates according to an intrapreneurial configuration, when it gives room for an internal, autonomous development of social innovation and social entrepreneurship. Thus the intrapreneurial routinized PSINSI operates under a mixed learning and innovation regime, combining aspects of entrepreneurial and routinized regimes. An intrapreneurial PSINSI is a young network created within a routinized (old) PSINSI, operating horizontally or led by a public or private agent. It is a small network, that brings together the intrapreneurial group that implements social innovation in a relatively autonomous manner, within the framework of the parent routinized PSINSI. The social innovation carried out by the intrapreneurial PSINSI breaks with the incremental innovation dynamics of the standard or canonical routinized PSINSI. The initiator of the intrapreneurial network should not be confused with the historical initiator of the parent routinized network.

DK5 (E-Bro and JOBiNTRA) can be considered to have initially operated under an intrapreneurial routinized regime (before moving to a spin-off regime). Indeed, Jacob (a company consultant at Brøndby Jobcenter) and his manager reconfigured a production network of flexi-job services for long-term disabled unemployed people by having recruitment agencies compete for a single individual, rather than by assigning an individual to a given recruitment agency. This reconfiguration was the result of personal initiatives at local level, rather than national administrative injunctions.

### Extrapreneurial routinized PSINSI

A routinized PSINSI operates according to an extrapreneurial configuration, when it is itself dedicated to creating networks. Apart from this difference in the type of social innovation implemented, it has all the characteristics of a canonical routinized network.

The following cases are examples of extrapreneurial routinized PSINSIs:

- FR5 (The Saillysian Factory) is a network which itself contributes to the creation of other networks (for example, a participatory garden).

- NO5 (Re-establishing personal networks for people living with dementia). This PSINSI aims to create (or recreate) social networks around people living with dementia.

- ES3 (Alas Foundation project/elderly with learning disabilities). The Alas Foundation is at the heart of various networks, including in particular a PSINSI focused on addressing the issue of aging among learning disabled people.

It should be noted that routinized PSINSIs are not the only ones that produce network innovations. Indeed, in an entrepreneurial regime, the activity of the network can also seek to create new networks. DK4 (Bybi/Citybee) and HU3 (CédrusNet/CedarNet), both of which we have identified as social constructionist PSINSIs, belong to this category. Thus DK4 (Bybi) is (or has been) involved in various partnership projects, in particular "The House of the Bees Project" and "The Honey Garden" (Fuglsang *et al.*, 2019).

## Spin-off routinized PSINSI

This is a PSINSI that originates from an individual's entrepreneurial activity within an existing public or private organization, an organization that the individual leaves to form an independent network.

In the Co-VAL database, examples of spin-off routinized PSINSIs include:

- DK5 (E-Bro and JOBiNTRA). The spin-off dimension is illustrated by the fact that Jacob, formerly an employee at Brøndby Jobcenter (and initiator of an organizational reconfiguration already mentioned above) left the Jobcenter to create a private company (E-Bro), which will develop an IT platform to coordinate the various players collaborating in the provision of flexijobs for the unemployed.

- DK3 (Mind Your Own Business-MYOB). The founder of this PSINSI (director of the association) initially worked at the Danish Refugee Council, where she developed her idea, starting in 2010. In 2016, MYOB became an organization in its own right, independent of the Danish Refugee Council.

- HU5 (BAGázs Public Benefit Association). This network aims to promote the inclusion of Roma in two Hungarian cities by offering them a number of services. It was launched by Emőke Both, who used to work as a probation officer, but left the administration to form this PSINSI.



**Figure 3 : Different expressions of PSINSIs under different innovation regimes** 

Whether they manifest themselves under an entrepreneurial or a routinized regime, these different configurations of innovation regimes are ideal-types that are not independent of each

other. As we have already pointed out, a PSINSI can evolve over a short period of time from the "social bricoleur" configuration to the "social constructionist" and "social engineer" configurations (see Figure 2). In the longer term, entrepreneurial-type configurations are likely to evolve towards routinized-type configurations. Similarly, the routinized configuration of the "institutional entrepreneurship" type (initiated by an existing organization) can evolve later on, once the network is constituted in line with any form of the routinized regime - in particular the standard or canonical form. Lastly, a single PSINSI evolving under a routinized regime can encompass different expressions of this regime. For example, FR2 (Zero Long Unemployed Territory) presents aspects of both a canonical and an extrapreneurial PSINSI.

### Conclusion

In the neo-Schumpeterian tradition, the notion of innovation network (and more generally the open innovation paradigm) is often seen as the expression of a third innovation regime that would complement the entrepreneurial regime (Schumpeter mark 1) and the routinized regime (Schumpeter mark 2). In this paper, focusing on a particular form of innovation network that develops within public services to implement social innovations (public service innovation networks for social innovation/PSINSIs), we have taken a different perspective, namely that PSINSIs are not the basis of a third regime, but can be seen in the light of entrepreneurial and routinized regimes.

Drawing on a rich empirical material from 24 in-depth PSINSIs case studies, providing information on the nature of social innovation, the structure of PSINSIs, their determinants, their formation and functioning modes, we sought to determine under the scope of which innovation regime each PSINSI falls.

The literature frequently associates social innovation and corresponding PSINSIs with the entrepreneurial regime of the heroic entrepreneur, founder of new enterprises and organizations. However, in reality, we have found that PSINSIs can also function according to a routinized regime. This is based on endogenous social innovation, implemented by pre-existing organizations that either build new networks or exploit existing networks.

Empirical material has also lead us to envisage a diversity of configurations within these two regimes. First of all, in the entrepreneurial regime, these are the social bricoleurs, social constructionists and social engineers, according to the distinction established by Zahra *et al.* (2008) and applied here to PSINSIs. The "social bricoleur" PSINSI falls within the scope of a weak and localized innovation trajectory. It provides small-scale solutions to local problems. "Social constructionist" and "social engineer" PSINSIs fall within the scope of more powerful social innovation trajectories. Even in a routinized social innovation regime, PSINSIs are not homogeneous. Where they are initiated by existing organizations, they can take the form of what we have called institutional entrepreneurship PSINSIs. Where the network already exists, the routinized regime can manifest itself in one or more of the following forms: standard or canonical, intrapreneurial, extrapreneurial or spin-off, depending on the main type of social innovation implemented (product-service, process, organizational, network, etc.) and/or its mode of organization.

The different PSINSIs configurations are not independent of each other. Inter- and intra-regime relationships can thus be observed. Inter-regime relationships reflect the natural migration of a given PSINSI from the entrepreneurial regime to the routinized regime. Intra-regime

relationships are the relationships that can be established between different configurations of PSINSIs within a given regime. Thus, for example, within the entrepreneurial regime, the "social entrepreneur" PSINSI may eventually evolve towards a "social constructionist" and then a "social engineer" configuration. Likewise, within the routinized regime, different configurations may appear at the same time or succeed one another.

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