Sharing Knowledge in Public Service Networks: a Case Study of Employment Services

Ettore Bolisani[1] and Enrico Scarso[2]
[1]Department of Management and Engineering, University of Padova, and
[2]International Association for Knowledge Management
ettore.bolisani@unipd.it
enrico.scarso@unipd.it

Abstract: Public services require efficiency and quick responsiveness. An effective management of knowledge and knowledge exchanges is vital. This paper addresses this issue by analysing the case of employment services, which have been subjected to profound reforms in the last years with the aim of providing services that fit the needs of local companies and workers. This is why today labour markets are often managed at local or regional levels, and are populated by wide networks of public and private intermediaries that try to match companies and workers locally. However, these networks require effective management of knowledge exchanges between players, efficient coordination mechanisms, and appropriate use of IT. The paper analyses the processes of knowledge exchange and sharing that characterises a significant case of networked public employment services: the Province of Vicenza, located in Northeastern Italy. The study is based on direct interviews with main actors, on the analysis of support systems and services (e.g. databases, portals), and of available documents. The players in the employment system are identified, and their structure, functions, resources and management approaches are examined. Particularly, the processes of interaction and knowledge sharing between players are analysed, and the web of knowledge exchanges mapped. The related issues of coordination and knowledge management are also investigated. The findings can help public policy makers and private company managers to set appropriate policies for employment services.

Keywords: Public services; knowledge sharing; knowledge exchanges; IT; employment services; case-study

1. Introduction

Public services require efficiency and quick responsiveness. Thus, an effective management of knowledge and knowledge exchanges is vital (Wiig, 2002), especially when services are provided by numerous integrated players that specialize in different functions. Today, a serious challenge for public policy is the organization of employment services that support labour markets by matching job opportunities and job seekers. In many countries, employment services have been subjected to profound reforms (van Berkel and Borghi, 2007). Provided that economies have significant differences at local level, there is awareness that employment services must fit the needs of local companies and workers. Consequently, labour markets are increasingly being managed at local or regional levels, by means of networks of public and private intermediaries (Benner, 2003). These networks require the effective management of knowledge needed by the various players, an efficient coordination mechanism, and an appropriate use of IT platforms that can improve effectiveness of knowledge sharing. The paper analyses a significant example of networked public employment services: the Province of Vicenza, in Northeastern Italy. The study bases on direct interviews with key actors, on the analysis of IT platforms (e.g. databases, web portals), and of available documents. The research identifies the players in the employment system, and examines their structure, functions, resources and management approaches. It traces and maps the web of knowledge exchanges between players, as well as the related coordination and knowledge management issues. Lastly, it explores the characteristics of IT platforms that may enable an effective knowledge sharing in this environment, and their drawbacks and issues.

2. Managing knowledge in public services

The importance of managing knowledge in public sector and public services has been widely recognized (Wiig, 2002; Moffet and Walker, 2015). A proper management of knowledge can enhance public decisions and help public services to better implement the public agenda. In public services, knowledge management (KM) practices have found application various in fields, such as policy development, crisis and disaster management, health and human services, education, and electronic government (Pee and Kankanalli, 2015).

Managing knowledge properly is considered important to face the pressure to innovate service delivery and to improve performances. In addition, decision making and delivery process in public services face peculiar problems that are highly complex (i.e. causes and effects are extremely difficult to identify), cross-cutting (i.e. comprising multiple, overlapping, interconnected subsets of problems that cut across multiple policy domains

28

and levels of government), and relentless (i.e. they can never be solved "once and for all" despite all the best intentions and resources). Consequently, public organizations need to create, exchange, share and apply knowledge across many agencies, organizations, and citizen groups (Dawes et al, 2009). Also, to improve network collaboration and knowledge exchange, public service organizations increasingly use IT applications.

The growing importance of KM in the public sector is confirmed by the recent literature (Massaro et al, 2015) and by the increasing diffusion of KM practices among public services (Seba and Rowley, 2010). However, public organisations are late adopters compared to private companies (Bolisani et al, 2011): implementing public KM initiatives seems to be particularly challenging. Liebowitz and Chen (2003) found that it is more difficult to share knowledge in public services because people associate knowledge with power and promotion opportunities. Seba et al (2012) assert that organizational structure, leadership, time allocation, and trust can be barriers to knowledge sharing. The peculiar role of leadership, the presence of formal systems, and the rewarding system are other factors that can hinder KM in public services (Pee and Kankanhalli, 2015). All this leads scholars to consider that a separate KM research agenda for the public sector is justified (Massaro et al, 2015). It should however be noticed that the literature has more often focused on some kinds of services (Education, Research, and Health), while others (for instance, those related to Welfare and Social Security) have rarely been investigated. In light of the above, this paper addresses the following points:

- the growing importance of knowledge assets and their management in public services;
- the fact that these services are increasingly provided by networks of private and public agencies that interact with one another;
- the consequent necessity, for public and private agencies, to exchange and share knowledge;
- the role of IT applications in supporting these knowledge exchanges.

3. Labour market and employment services

Today's employment policies aim at facilitating hiring by companies, making work more worthwhile, reducing the number of unemployed individuals that need social benefits, integrating weak or aged population in the labour market, etc. These policies can be implemented by means of a bundle of several complex services that include not just helping job seekers to find employers and vice-versa, but also implementing programs of requalification or apprenticeship, tutoring and counselling targeted to both workers and companies, and so on. All these services are knowledge-intensive, and require specialized professionals.

To better provide them and, at the same time, to face public budget restrictions, many countries have changed the organisation and management of their policies. Traditional providers, particularly state employment offices, are losing their supremacy in favour of other players which are endowed with specialized knowledge and infrastructure, or are closer to beneficiary groups. Temporary job agencies, private employment companies, social cooperatives, trade associations, charitable organizations, education services are all examples of organizations that cooperate with the State for the provision of employment services.

The different nations are implementing different models. It is however possible to find some recurring features, concerning the following three processes (López-Santana and Moyer, 2012; Zimmermann et al, 2014):

- "decentralization": delegation of employment services from central State to local agencies and authorities, for tailoring policies to the peculiar needs of the local labour market;
- "marketization": a situation where employment service providers – either public or private – compete on the market, to improve efficiency and effectiveness;
- "Inter-agency cooperation": deliberate creation of partnerships between various operators to tackle the barriers and work through a multidimensional perspective.

These changes can also have unintended consequences. The shift of powers implied by decentralization may result in a subdivision amongst different government levels which can weaken transparency and accountability. Also, the provision of pragmatic solutions to local problems can prevent the identification and implementation of general goals. In addition, an increasing local autonomy raises the risk of inequalities on a territorial basis. Similarly, marketization raises the question of public responsibility for quality, accessibility and universality of services. Leaving the delivery of interventions to private bodies might also compromise the support for people at the bottom end of the labour market, who are considered "less marketable".

In short, the new service modes have made the central State lose its ultimate dominance. Now, there is the need for effective instruments that enforce policy implementation and correct the potential drawbacks caused by delegating mechanisms and pluralisation of actors (Green and Orton, 2012).

3.1 Network models

As said, employment services are increasingly based on the direct involvement of public and private players that integrate and supplement their knowledge and specializations. This model can be indicated as a *network governance model* (Fuertes et al., 2013). It reinforces roles and power of local independent actors and, at the same time, it relies on private services but it is not pure marketization: the government still plays a key role of negotiating and brokering interests and shared-values among the different actors. Instead of fixed roles and boundaries, joint-action, co-production and cooperation are exploited. Leadership is shared internally and externally within collaborative structures. Also, service users and other stakeholders can get involved, more than in the past, in the development and implementation of policies or programs (Considine and Lewis, 2003).

Network models differ across countries (Cicciomessere and Sorcioni, 2009) but, they all contemplate the presence of different public and private actors which can play a more or less diverse role, have to cooperate and, therefore, must find a coordination mechanism. Indeed, the effective working of a network depends on a set of conditions that must be met. Firstly, all players (i.e. the nodes of the network, in technical term) must give an active contribution to achieve the overall shared goals. Secondly, there must be a rich set of complementary competences, resources and skills, but a limited overlapping of targets of each player and service. Thirdly, knowledge has to circulate freely enough so that each node is aware of the opportunities that are available to the entire network. Fourthly, some coordination/governance activities are needed, to ensure that the various nodes do not conflict with each other. In particular, the paper focuses on how effective knowledge exchanges can take place, and how this influences the effective functioning of the network.

4. Research questions and methodology

The paper analyses a significant case of networked public employment services. The unit of analysis is the network of labour services of the Province of Vicenza, located in the Northeast of Italy. Vicenza represents a good example of a model that combines public functions and a decentralization and networking of activities. In addition, the Provincial government has had an important function in managing the flow of funds for labour and in coordinating the actions of different private or public operators.

We used the case study approach given the descriptive and exploratory nature of the research and the complexity of the investigated issue (Leedy and Omrod, 2005; Yin, 2003). Particularly, the research investigates:

- flows of knowledge and knowledge exchanges that are necessary for providing employment services in a context that involves many private and public actors;
- mechanisms and tools that can be used to manage such exchanges, and their usefulness and problems;
- coordination issues that arise in this context;
- potential and problems of IT use to support knowledge exchanges and network coordination.

The research consisted of these steps: a) identification of the various players operating in the system; b) analysis of structure, functions, resources and management approaches of each player, with particular reference to the activities related to employment services; c) analysis of the processes of interaction and knowledge exchange, and mapping of knowledge flows; d) investigation of the critical issues of IT use and network coordination. Data were collected by means of the typical methods of case studies, and in particular:

- analysis of relevant official papers regarding the organization of local labour services;
- interviews with key informants, namely delegates representing the different categories of players operating in the system;
- analysis of the collected data, which was next discussed with delegates of the local government, to receive additional feedbacks.

5. Findings

Table 1 summarizes the categories of players that act in the Province and that were analysed in the study. These players have various functions in the network: sometimes these functions overlap, some other times

they integrate to one another. Some actors play a key role in the labour market, others have other missions but support employment occasionally.

The local Government of Vicenza Province is the main public institution that deals with local employment: it directly provides services, and plays a central role in managing public resources and coordinating the network. Local Employment Offices have been, so far, part of the Provincial organization. They provide a wide range of services, that include: a) collection and dissemination of information about job opportunities, employment programs, training opportunities, and formal procedures; b) direct management of formal procedures (e.g. registration of new hires, apprenticeship programs, inclusion in unemployed lists); c) consulting to other intermediaries; and d) job research and pre-selection by matching profiles of unemployed people with requests of companies. As regards the last point, even though these offices manage a database of vacant positions, requests of companies, and profiles of candidates, they are rarely able to perform such activities effectively, due to the lack of resources. Therefore, they tend to mainly perform bureaucratic functions.

Table 1: Outline of network players

Category of player	Functions in the network	Examined organizations
Provincial Government	Direct provision of employment services; public funding management; network coordination	*Amministrazione Provinciale di Vicenza*
Local Employment Offices	Direct provision of employment services; consulting; information provision; support in research and selection	*CPI (Vicenza, Schio, Bassano, Lonigo)*
Labour Unions	Help in job matching; participation in policy boards; training	*CGIL; CISL;* UIL
Industry Associations	Job marching; training; information about labour markets and job opportunities; participation in policy boards	*Confindustria Vicenza Confartigianato; CNA; API*
Temporary Job Agencies	Temporary workers; personnel research and selection	*Randstad; G Group*
Labour consultants	Help companies in legal and administrative practices	*Ordine Consulenti del Lavoro – Vicenza*
Health Agencies	Manage inclusion programs of disadvantaged people	*ASL 3 Bassano; ASL 4 Schio ASL 5 – Arzignano*
Social Cooperatives	Help managing inclusion programs of disadvantaged people; training and internships	*Consorzio Prisma; Coop. Insieme; Coop. Orsa Maggiore; Coop. Verlata Lavoro*
Local Municipalities	Management of inclusion programs of needy residents; participation in policy boards	*Comune di Montecchio Comune di Bassano*
High Schools	Training; organization of internships for students; help in personnel research	*IPSIA Lampertico ITCG Einaudi*
Universities	Training; organization of internships for students; help in personnel research	*Università di Padova - Ufficio Job Placement (Padova and Vicenza offices)*
Training agencies	Training; participation in cooperative programs of job inclusion	*Penta Formazione; Eurocultura; C PV; ENAC; Pia Società San Gaetano*
Charities	Apprenticeship; support to disadvantaged people	*Caritas Vicenza*

Labour Unions represent workers in disputes with companies, and supply consulting, training, fiscal and administrative services to associates. They participate in boards and panels where labour public policies are discussed. Occasionally, they can help job matching, by exploiting the informal relationships that their officials have established with workers and companies, or by helping job seekers to complete formal procedures.

Industry Associations provide various services to member companies and represent them in disputes with labour unions and employees. They help companies to organize apprenticeship programs, provide training services, and disseminate information about labour markets. Associations can also collect profiles of job seekers and occasionally help companies in personnel research and selection.

Temporary job agencies play a double role. They directly hire workers that are then provided to firms to meet temporary needs, and they provide services of personnel research and selection. For this, they collect profiles

of job seekers and requests of companies, publish classified ads in their website, and manage private internal databases of profiles and requests.

Labour consultants are independent professionals that assist firms (especially the smaller ones) in human resource management (procedures of hiring and firing, disciplinary actions, disputes with labour unions, etc.). Generally they don't provide employment services in strict sense, but they perform the administrative procedures related to hiring, apprenticeships, etc.

Health Agencies organise public health services. Employment is not their core mission, but the Italian laws assign them a special role in managing inclusion policies of some disadvantaged people (disabled, drug addicted, ex-cons). To do that, they work in strict contact with employment offices as regards the bureaucratic procedures, and also exploit a network of personal relationship with local companies. They collaborate with social cooperatives, whose mission is to help disadvantaged people. These are private (non-profit) organizations, and can manage training and inclusion programs on mandate of health agencies.

Local Municipalities, which have also the mission to assist their needy residents, tend to develop their own services and agencies to help citizens find a job, provide funded training courses or apprenticeship programs, etc. They often exploit a network of informal relationships with local companies, established by Mayors or Councillors. Sometimes they act on their own, sometimes in collaboration with other municipalities.

High schools organize periods of apprenticeship at companies for their students. They have established trustworthy connections with local companies that are willing to host students for some weeks. They also collect lists of diploma holders that can be of use to companies for their personnel research.

Local Universities have a special role in the employment of young graduated, as they organize internships and on-job training. This important mechanism enables local companies to select young qualified employers. Universities have a special office and run a private database of profiles and of companies' requests.

There are also several training (public or private) agencies which use public funding or private resources to provide training services of various kinds. Finally, there are Charities that use donations to organize programs of job inclusion in favour of disadvantaged and needy people. These actions exploit personal relationships established with local firms by operators.

5.1 Operative processes

To understand knowledge exchanges and use of IT, the processes underpinning employment services have been analysed.

A general problem of unemployed people is how to write an attractive profile for the market. Often they are not able to valorise their experience and qualification. At the same time, the databases that should contain their profiles (especially those managed by public agencies) adopt rigid schemes and complex classifications, and miss the most important features.

The most favourable case is that of young and highly qualified people. The contact with prospective employers can still occur at the University, for example in the form of pre-graduate or post-graduate internships that can later become hiring opportunities. Therefore, young graduates will probably avoid going to an Employment Office. A similar situation can be that of holders of a technical diploma. In short, rarely qualified job seekers count on Employment Offices.

The situation differs for those without a special qualification, especially if they lose their job. They will probably disseminate their profile to any possible organization (company or intermediary) or will seek references and introductions. Also, they will likely go to an Employment Office to be included in lists of unemployed, which is also necessary to get benefits or other forms of assistance. The Office will upload the profile of job seekers in a database. This can be used to perform actions of job matching, but in the practice it is not very effective for three main reasons: first, the electronic databases that collect profiles are complex and often ineffective; secondly, the officials working in employment offices are generally undersized, and in any case they don't have the special competences that are required for personnel selection. Thirdly, companies rarely send them enough information about their requests, so these may not appear in databases.

An even more complex case is that of aged people or needy individuals for whom the processes described above are often ineffective. The network exploits the various players so that they can help to face difficult and sometimes dramatic situations. Quite often these people ask help to their municipal services, or even to charities. A special category is that of disadvantaged people (disabled, etc.) who are managed by Health Agencies by means of a special channel.

A problem is that the current economic climate doesn't facilitate hiring. Also, especially for the smaller companies that don't have a Human Resource Management division, firms rarely plan their personnel research in time. This clearly reduces the effectiveness of services. Another issue is that companies often have difficulties in expressing their real needs and the profiles they seek, which complicates the task of intermediaries. Finally, quite often companies hire only if they have the opportunity of some kind of economic benefit (e.g. fiscal benefits, public funding) maybe associated to periods of internships that allow them to test a new employee. Finally, rather than exploiting intermediaries, companies generally prefer reliable references.

5.2 Map of interactions and knowledge exchanges

The great heterogeneity described above results in a complex system. Figure 1 reports a map of the main inter-player relationships. No single node has all the knowledge that is required to manage each single case. So, to perform their own functions, players need to share and exchange knowledge with each other. Exchanged knowledge, however, can vary from a case to another. It ranges from very structured and formal contents to unstructured or informal. All this makes the management of interactions very complex.

Also, although many nodes are connected to one another, relationships sometimes occur by means of other players. But while some nodes appear to be more connected (especially, the public employment services), there is no central player that is capable to manage all the different interactions and knowledge exchanges.

5.2.1 Characteristics of exchanged knowledge and related issues

The knowledge needed to manage employment services is of different nature (table 2): there are various modalities of codification, access, and updating. Some criticalities emerged from the investigation.

A key point regards the profiles of job seekers. In a network where different intermediaries cooperate, one may think that there is a single database where all profiles of job seekers are stored. The situation is, instead, quite different. The profiles are collected by different players and stored in distinct databases that are not interconnected. This can make the matching between job vacations and job seekers inefficient, and results in people, companies and even intermediaries passing from a place to another to look for the useful piece of knowledge. Sometimes, the profile of the same person is stored in distinct databases but in different ways, which results in inconsistent and confusing knowledge. On the other hand, there are different cases to manage and there are distinct players that operate: the knowledge that is necessary in a case may be different to the one that is appropriate for other circumstances. Consequently, designing a centralized repository where all kinds of useful knowledge are properly coded and stored becomes more complex.

Indeed, a special issue concerns the codification and classification of job experience/specialization of people, of job vacancies, and of real needs of companies: if this piece of knowledge is classified improperly, matching demand and offer will be extremely difficult. The public offices generally use formal classifications that are imposed by laws (as those of the central statistical bureau) but the market often needs more flexibility. Furthermore, it is not often easy to classify the needs of companies and transform them in codified job vacations. Quite often, companies are unable to explicit their knowledge in a formal way, as would be required by employment services. Another consequence is that automatic search engines, that might be used to match job vacancies and people profiles rapidly and efficiently, are quite often ineffective.

5.3 Knowledge exchanges and IT systems

In a network like the one described, an effective IT platform that enables players to perform crucial knowledge exchanges can be critical. The study investigated three issues: a) characteristics of exchanged knowledge; b) web portals accessible by the public; and c) private repositories.
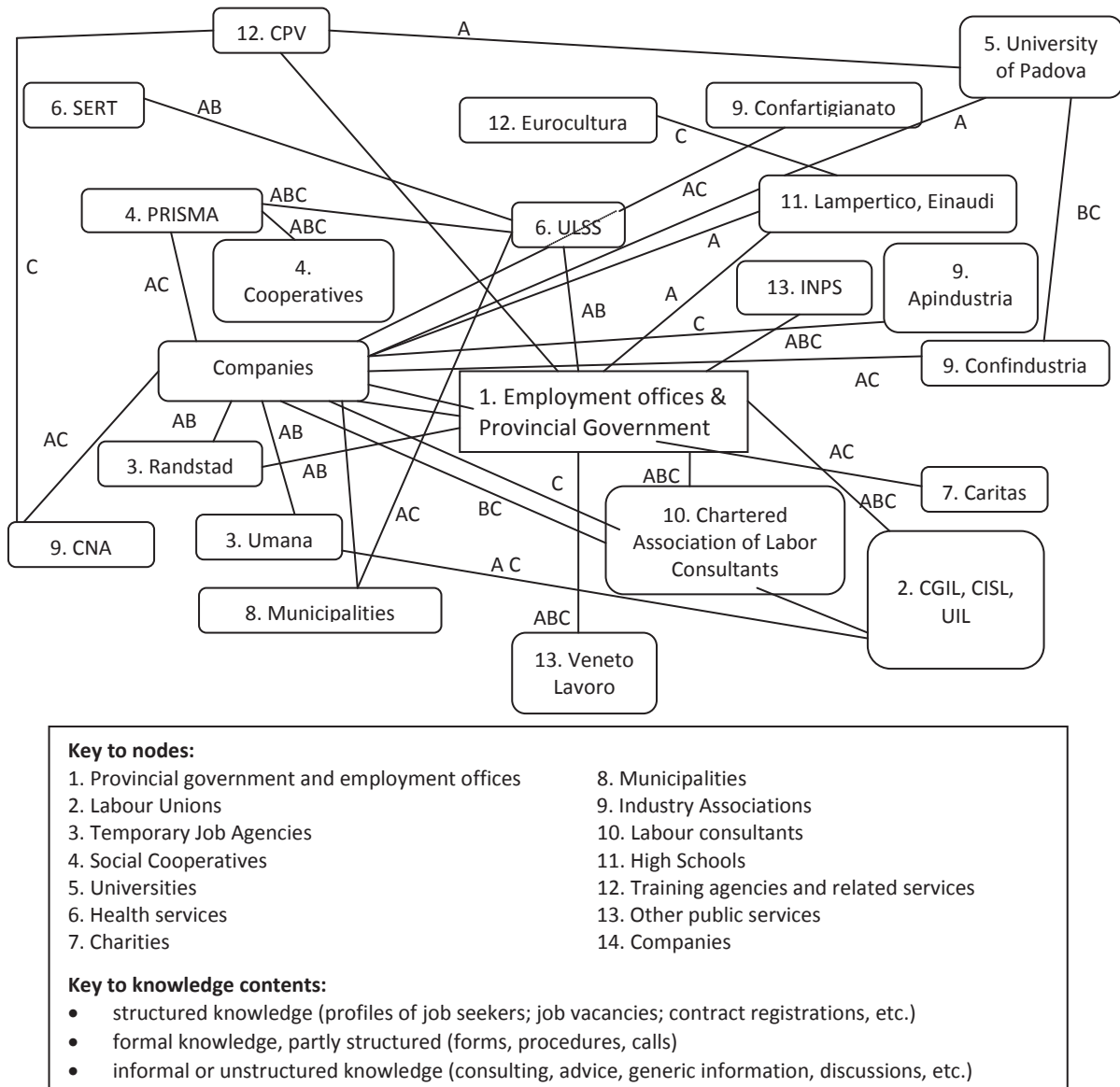
Figure 1: Map of interactions and knowledge exchanges

Another big issue is the potential conflict between public and private knowledge: the former can circulate and be used freely, while the latter is appropriated by a particular player and privately used. This conflict especially regards the lists and profiles of job seekers, of firms and of their needs. In a cooperative network, the more freely knowledge circulates the better is for the overall system. However, there are two obstacles. First, collecting, classifying, storing and delivering knowledge about job seekers and companies has a value. So, some private players may be not willing to share with others this knowledge, which has highly competitive value for them. Second, employment offices spend public money to collect and manage this knowledge, and it is questionable if it is fair that they make it circulate freely to players that can later use this knowledge for their private purposes. All this also explains the proliferation of distinct databases and repositories, with little or no interconnection to one another. So, knowledge pertaining to the single case (company, job seeker, apprentice program, or whatever) is often re-coded and re-stored in different places, maybe in different forms.

5.3.1 Public web portals

IT platforms can be useful to help stakeholders exchange valuable knowledge. The study firstly considered public sources, i.e. the platforms that are accessible by any user (table 3). The in-depth analysis of these portals shows that users still have multiple sources from which they can get even the same piece of knowledge. In principle, this richness can be useful, but the drawback is that users, especially if they are not expert or capable to get the essence of the available knowledge, may get lost and be unable to correctly

evaluate the provided contents. In addition, contents can be more or less updated, and sources themselves more or less reliable; finally, the retrieved contents are sometimes the same, sometimes conflicting.

Table 2: Characteristics of exchanged knowledge

Kind of knowledge	Key contents	Repository	Sources	Users
General knowledge about intermediaries	Name, functions, services, contacts, etc.	Lists and web portals of public institutions; websites of single intermediaries	Intermediaries; institutions	All players in the network
Funding opportunities	Calls, rules, procedures, etc.	Newsletters and websites of proposers	Proponing agencies (e.g. Region)	Intermediaries, companies
Specific details about opportunities and funding	Forms, rules, official bullettins, etc.	Public websites; institutional databases; internal offices of proposing agencies	Proposing agencies	Intermediaries
Profiles of job seekers	Names, specializations, previous jobs , expectations, etc.	Private repositories	Job seekers; intermediaries	Intermediaries; compagnie
Lists of companies	Names, contacts, descriptions	Public yellowpages; Chamber of commerce; Industry associations; databases of intermediaries	Companies; chamber of commerce	Intermediaries; job seekers
Job vacancies and other open positions	Descriptions; contractual conditions; proposing companies or agencies	Public webportals; Company websites; job agencies; intermediaries	Companies; intermediaries	Job seekers Intermediaries
Training courses	Description, rules, etc.	Websites of training agencies; other public webportals; official bullettins	Training agencies and other intermediaries	Job seekers; companies; intermediaries
Results of job inclusion programs	Results, *follow up*, performance measurement	Private databases	Proposing agencies; Monitoring authorities	Monitoring authorities; Public government

A single portal could, at least, lead users to the various sources, but at the moment there is none. Another problem is that sources have a different degree of reachability. A search test conducted in June 2015 by using Google with combinations of different keywords (i.e. "employment" "service" "job" "Vicenza" and similar) showed that the search engine pagerank algorithms tend to place generalist websites in the first positions, some of which are little related to job seeking and employment. While specialized portals – and especially those listed in table 3 – often do not appear in the first pages, or they appear only between many other websites. All this may confuse a generic and inexpert user.

5.3.2 Private repositories

As mentioned, databases of profiles and job vacations, privately managed by intermediaries and services providers, still are a fundamental component of the employment service network. Employment offices manage an important repository where thousands of data are collected. Although officials can read and write, they don't manage the database directly: decisions about codes, formats, data structures, and search applications are taken at a different government level (i.e. Region or State). This deeply affects the effectiveness and fruition of knowledge. Also, private intermediaries normally don't have direct access to these databases. As said, there has been discussion on whether and how access should be granted to external organization and private businesses, but an agreement has never been reached. Some public officers affirm that private intermediaries may have access to data of employment services only on condition that these private firms reciprocate by giving access to their private data, but clearly this raises an issue of competition.

So, the situation is that there is a multiplicity of private repositories of precious knowledge that are not integrated to one another and are run privately by the single organization. Therefore, any time there is the need of an interaction and exchange of knowledge between network nodes, this can occur only with the explicit permission and action of human officers. In addition, the final users (i.e. companies and job seekers) may need to contact many different intermediaries to search for a piece of knowledge or to upload their profile or job vacation. All this causes waste of time and inefficiency.

Table 3: Web portals

Name	Managing organization and coverage	Main Goal
Cliclavoro www.cliclavoro.gov.it	Ministry of labor and social policy (national coverage)	Provision of Information Employment services
Provincia lavoro http://www.provincia.vicenza.it/lavoro	Provincial Administration – Vicenza (local coverage)	Provision of Information Employment services
Randstad https://www.randstad.it	Temporary job agency (national/local coverage)	Classified ads repository
Infojobs http://www.infojobs.it/	Employment ad website (National coverage)	Classified ads repository Employment search engine
Cercandoilavoro http://www.cercandoillavoro.it/	Association of municipalities (local coverage)	Provision of Information Employment services
Informagiovani Vicenza http://www.informagiovani.vi.it/	Vicenza's youth information service (local coverage)	Provision of Information
Unimpiego http://www.unimpiego.it/	Ad website of Confindustria (Industry Association) (national coverage)	Employment search engine
Stage Unipd (Vicenza) http://www.stageunivi.it	University of Padova's apprenticeship service (local coverage)	Apprenticeships and employment services

6. Discussion

The study allowed highlighting a number of points of strength and weakness that are related to the management of knowledge in the studied network of public services. The main strengths are as follows:

- the cooperation between different players having distinct specializations makes it possible to cover knowledge needs of various nature, as is necessary in an environment where final users (i.e. job seekers and companies) are highly heterogeneous;
- the service network is flexible, because different groups of nodes can be activated in relation to the different cases that emerge in the territory;
- combinations of different pieces of knowledge in different situations become possible, which again fits the needs of personalized services.

Considering weaknesses, here are the main aspects to underline:

- the richness of knowledge in the network makes interactions complex. Redundancy, inconsistency and duplication can cause confusion and inefficiency. No single node can manage all knowledge exchanges;
- a potential conflict regards knowledge exchanges, especially those that involve private and public players; this conflict reflects the different nature of knowledge that is possessed and used by the different players that must at the same time cooperate and compete;
- IT platforms are, in principle, a key tool for facilitating coordination of interaction and knowledge exchanges. However, the use of these applications is difficult due to the different codes, formats and nature of the knowledge that is treated and exchanged.

7. Conclusion

The case study provides lessons for the management of knowledge exchanges in public services that involve a plurality of cooperating players, which is an increasingly important case. Especially, there is the need to find a proper balance between the formal management of knowledge exchanges (as is necessary from a perspective of transparency and bureaucracy) with a flexible modality as is required by networks that involve public and private players which have different mechanisms of functioning. In particular, there is the need for new rules and mechanisms that make it possible to exchange and combine public and private knowledge for the benefit of all involved parties. New systems of intellectual property protection and related agreements can be of use.

Another issue concerns the coordination mechanism of flexible service networks. For the provision of public services, the role of public government remains central, but this role can't be simply based on the application of formal rules but, rather, it requires the capability to understand knowledge needs of all stakeholders and to set the proper conditions that enable them to interact properly.

All this also influences the design of IT platforms for knowledge exchange. While, for reason of efficiency, it would be better to use a centralized system where all contents are stored and can be retrieved from, this is difficult due to the complex bundle of knowledge that is used in the network by the various nodes, and to the potential competition that still exists between players that, on the other hand, have to cooperate.

The paper has some limitations that can however represent the opportunity for a new research agenda. In particular, while this is a single case-study from which it is difficult to draw general conclusions, it would be interesting to make comparisons with other cases, either in the same service sector but in a different geographic area, or in different typologies of public services.

References

Benner, C. (2003) "Labour Flexibility and Regional Development: The Role of Labour Market Intermediaries", *Regional Studies*, Vol 37, No. 6-7, pp 621-633.

Bolisani, E., Gambarotto, F. and Scarso, E. (2011) "Communities of Practice: Comparing Experiences from Private Companies and Public Organisations", in Lehner, F. and Bredl, K. (eds.), *Proceedings of the 12th European Conference on Knowledge Management*, Academic Conferences Limited, Reading, UK, pp 107-114.

Cicciomessere, R. and Sorcioni, M. (2009) *La collaborazione tra gli operatori pubblici e privati*, Italialavoro, Roma.

Considine, M. and Lewis, J.M. (2003) "Bureaucracy, network, or enterprise? Comparing models of governance in Australia, Britain, the Netherlands, and New Zealand", *Public Administration Review*, Vol 63, No. 2, pp 131-140.

Dawes, S.S., Cresswell, A.M. and Pardo, T.A. (2009) "From "need to know" to "need to share": Tangled problems, information boundaries, and the building of public sector knowledge networks", *Public Administration Review*, Vol 69, No. 3, pp 392–402.

Fuertes, V., Jantz, B., Klenk, T., and McQuaid, R. (2014) "Between cooperation and competition: the organisation of employment service delivery in the UK and Germany", *International Journal of Social Welfare*, Vol 23, No 1, pp S71-S86.

Green, A.E. and Orton, M. (2012) "Policy Innovation in a Fragmented and Complex Multilevel Governance Context: Worklessness and the City Strategy in Great Britain", *Regional Studies*, Vol 46, No. 2, pp 153-164.

Leedy, P.D. and Omrod, J.P. (2005) *Practical Research – Planning and Design. Pearson*, Upper Saddle, NJ, 8th ed.

Liebowitz, J. and Chen, Y. (2003) "Knowledge-sharing proficiencies: the key to knowledge management", in Holsapple, C.W. (Ed.), *Handbook on Knowledge Management 1: Knowledge Matters*, Springer, Berlin, pp 409-424.

López-Santana, M. and Moyer, R. (2012) "Decentralising the Active Welfare State: The Relevance of Intergovernmental Structures in Italy and Spain", *Journal of Social Policy*, Vol 41, No. 4, pp 769-788.

Massaro, M., Dumay, J., and Garlatti, A. (2015) "Public sector knowledge management: A structured literature review", *Journal of Knowledge Management*, Vol 19, No. 3, pp 530-558.

Moffet, S. and Walker, T. (2015) "Knowledge Management in the Public Sector: UK Case Study perspectives", in Bolisani, E. and Handzic, M. (eds.), *Advances in Knowledge Management. Celebrating Twenty years of research and Practice*, Springer, Cham, pp 67-104.

Pee, L.G. and Kankanhalli, A. (2015) "Interactions among factors influencing knowledge management in public-sector organizations: A resource-based view", *Government Information Quarterly*, forthcoming.

Seba, I. and Rowley, J. (2010) "Knowledge management in UK police forces", *Journal of Knowledge Management*, Vol 14, No. 4, pp 611-626.

Seba, I., Rowley, J. and Delbridge, R. (2012), "Knowledge sharing in the Dubai police force", *Journal of Knowledge Management*, Vol 16, No. 1, pp 114-128.

van Berkel, R. and Borghi, V. (2007) "New modes of governance in activation policies", *International Journal of Sociology and Social Policy*, Vol 27, No. 7/8, pp 277-286.

Wiig, K.M. (2002) "Knowledge management in public administration", *Journal of Knowledge Management*, Vol 6, No. 3, 224-239.

Yin, R.K. (2003) *Case Study Research. Design and Methods*, SAGE Publications, Thousand Oaks, 3rd ed.

Zimmermann, K., Aurich, P., Graziando, P.R. and Fuertes V. (2014) "Local Words of Marketization – Employment Policies in Germany, Italy and the UK Compared", *Social Policy & Administration*, Vol 48, No. 2, pp 127-148.