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*Article*

# Cluster Policy in the Light of Institutional Context—A Comparative Study of Transition Countries

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**Abstract:** The business environment in transition countries is often extraordinarily challenging for companies. The transition process these countries find themselves in leads to constant changes in the institutional environment. Hence, institutional voids prevail. These institutional voids cause competitive disadvantages for small and medium enterprises. Cluster policy can address these competitive disadvantages. As cluster policy generally aims at supporting companies' competitive advantage by spurring innovation and productivity, it can help to bridge institutional voids. This article's research question aims at analyzing and comparing cluster policies in the institutional context of two transition countries (Serbia and Tunisia) and analyzes to what extent cluster policies in these two countries are adapted to institutional voids prevailing there. The case studies offer insights into apparent difficulties of clusters in bridging formal institutional voids, as well as, notably, into the informal void of skill mismatches in the labor market. Still, for some specific voids, clusters do at least implicitly assume a bridging role. While the cluster policies examined do not explicitly target the institutional voids identified, cluster management can—in the course of time—align its service offering more closely with these voids. Bottom-up designed cluster policies can play an especially important role in such an evolution towards bridging institutional voids.

**Keywords:** cluster policy; transition countries; institutional context; institutional voids; Serbia; Tunisia

## 1. Introduction

Companies in transition countries often find their business environment extraordinarily challenging. The transition process itself creates constant changes in the institutional environment due to the ongoing adaption of the institutional environment from one system to another.

These instabilities in the institutional environment lead to institutional voids as systems are established and laws are promulgated. In times of institutional change, "old" laws are often still in existence while "new" laws replace former ones but do not address critical issues or are even contradictory. Institutional voids refer to missing or insufficiently designed institutions; hence, missing formal or informal "rules of the game" [1]. Furthermore, institutional change, no matter if formal or informal, takes time [2]. It is this period of time that we commonly regard as the transition process.

This transition process with its institutional voids puts small and medium enterprises (SMEs) at a competitive disadvantage. Institutional voids typically prevail in capital and labor markets as well as in contract enforcement. Voids in the labor market are usually linked to deficiencies such as missing systems of specialized education and insufficiently designed labor contract laws, while voids in the capital market refer to missing or insufficient capital provision. Similarly, contract enforcement is hindered by problems such as poor alignment of laws and insufficiently staffed judicial systems [1,3,4].

Governments, in transition and non-transition countries alike, attempt to offset these competitive disadvantages with economic development policies such as cluster policies. Cluster policy generally aims at supporting companies' competitive advantage by spurring innovation and productivity through a spatial agglomeration of companies from the same or related industries.

This article aims at analyzing and comparing cluster policy in the institutional context of two transition countries—Serbia and Tunisia—and asks to what extent policies are adapted to prevailing institutional voids. To do so, first the institutional context of the two cases is analyzed. In a second step, the cluster policies of these countries are analyzed with regard to their specific approach towards existing institutional voids. While our research so far cannot shed full light on the role of clusters in bridging institutional voids in the two transition countries, it is our intention to suggest a research agenda. In our view, the notion of institutional voids can serve as a powerful lens to analyze and develop cluster policies in transition countries. By addressing some issues related to institutional voids and cluster policies in Tunisia and Serbia, we intend to contribute to a refinement of the notion specifically for transition economies and to contribute to the literature on institutional economic geography [5,6].

This article does not differentiate between types of former systems but rather applies a broader understanding of transition countries, partly derived from political science. It regards all countries that are transitioning from one political system to another as transition countries, without consideration of the economic orientation of that political system. This term is broader than the term "transition economies" which in some disciplines is used specifically for former socialist economies transitioning towards a market economy. In addition to these post-socialist countries, the term transition country includes developing countries undergoing significant economic change such as Tunisia. Our terminology is in line with language used in the international arena, e.g., in the framework of the "Deauville Partnership" which explicitly calls Egypt, Jordan, Libya, Morocco, Tunisia, and Yemen "transition countries" [7].

In Section 2, the article first discusses the existing literature on the institutional context in transition countries with a special focus on institutional voids before reviewing literature on cluster policies in transition and non-transition countries. The remainder of Section 2 demonstrates the construction of the research framework to analyze cluster policies in transition countries. Section 3 describes the two case studies and their methodologies. Section 4 concludes the analysis and provides suggestions for further research.

## 2. Constructing a Research Framework

### *2.1. The Institutional Environment and Its Voids*

To analyze the adaptation of cluster policy to transition countries' frameworks, a conceptual approach that considers the contextual constraints is needed. The institutional economic geography perspective [5,6], combines a consideration of the institutional context, the change of these institutions, and the interplay with institutional arrangements such as geographic agglomerations. Williamson [8] and North [2] discussed the role of the institutional environment as "rules of the game" and the constraints that shape behavior. The institutional environment consists of formal constraints such as laws and rules and informal constraints such as norms and behavioral patterns. Fitting to this institutional environment, institutional arrangements - organizational forms such as firms or clusters - will naturally evolve [2,9]. North [2] states that, if this fit fails or if institutions are insufficiently designed, economic development is hindered.

As depicted in Figure 1, the informal institutional environment takes much more time to change. Herein lays the crux in transition countries and, at the same time, the merit of analyzing policies in such economies through an institutional perspective: The policy makers in transition processes focus mainly on the formal institutional environment, hence, adapting laws and regulations to the newly desired political or economic model. The time the formal institutional environment needs to change as well as its embeddedness in the informal institutional environment (e.g., existing norms or religious practices) is often underestimated or even neglected.

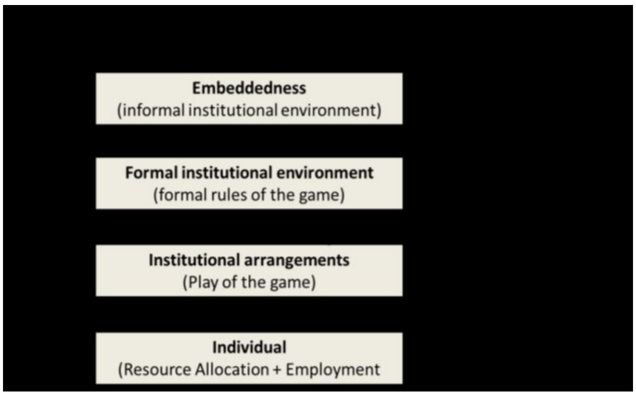


**Figure** 1. Four Level Scheme (based on [9] (p. 597).

Such insufficiencies or misfits between different layers of the institutional environment are defined as an institutional voids [10,11], which occurs “when specialized intermediaries are absent” [1] (p. 184) and view intermediaries as “economic entities that insert themselves between a potential buyer and a potential seller in an attempt to bring them together by reducing potential transaction costs” [1] (p. 184), that are necessary facilitators due to the intensifying complexity of a business transaction. However, this strand of research concentrates mostly on emerging countries and on performance effects of business groups and multinationals [12,13] and, hence, does not aim to develop a sound concept of institutional voids. The literature referring to this work on institutional voids is limited, and a detailed discussion of his definition is only just beginning.

With an interdisciplinary literature research, Mair and Marti [3] expand the term ”institutional voids” by defining them as “situations where institutional arrangements that support markets are absent, weak, or fail to accomplish the role expected of them” [3] (p. 422). While Khanna [14] and Ricart *et al.* [1] focus on institutional voids that hamper the functioning of markets in general, Mair and Marti [3] include situations where institutional voids impede certain actors to access markets and thus to offer opportunities.

Mair *et al.* [15] follow a different understanding of institutional context and institutional voids. They argue that scholars have all too often perceived institutional voids as empty places in the institutional setup and aimed at the transfer of “institutional technology as a compensatory mechanism over local experimentation and recombination” [15] (p. 821). They shift the perspective and consider different logic of efficient institutional arrangements. They show that various institutions other than Western-style ones exist and that some local institutions are actually preferred by local actors.

This paper will follow the idea that voids can occur when institutional arrangements are “absent, weak, or fail” [14] (p. 3) to conduct their tasks. This view widens Khanna’s perspective in two ways: first in considering missing intermediaries and other institutional arrangements, and second in considering absent institutions but also institutions that are in place but do not work properly. Furthermore, we follow Mair *et al.* [14] in regarding these voids not necessarily as empty spaces, and in suggesting that an establishment of Western-style institutions might not be the ultimate solution but that multiple institutional logics exist. Hence, institutional voids occur on the institutional environment level, such as a new law passed that does not fit to prevalent cultural norms, or on the level of institutional arrangements, such as a missing market research institution.

Figure 2 provides a summary of the four main categories of institutional voids and refers to the literature they are derived from.

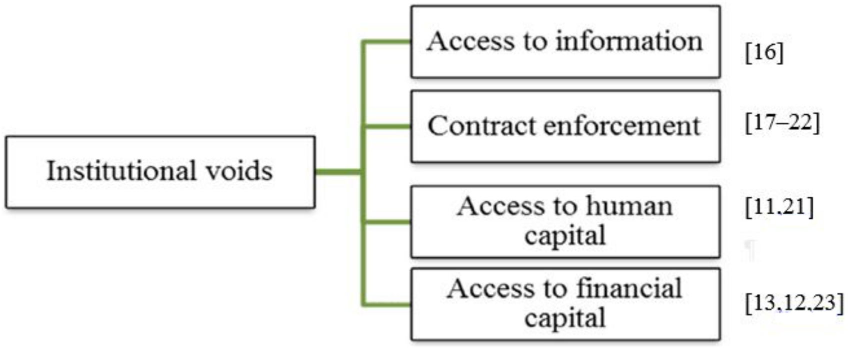


**Figure** 2. Literature overview: Types of institutional voids (source: own work).

### *2.2. Cluster Policy*

Research on institutional voids concentrates mostly on emerging countries. It shows that resources to bridge these voids are generally available to multinationals or to business groups but not to single SMEs [12,13]. A business group is an informal, closed network. SMEs often find it difficult to gain access to contacts within such a business group. A more formal network can perform similar functions as a business group but tends to be more accessible to SMEs. Such a formal network is a possibility to bridge institutional voids and support the competitive position of these SMEs.

Cluster policy includes a wide range of interventions by public and/or private agents designed to support the creation of value-added and employment through agglomeration economies. While support to networking is not the only possible orientation of cluster policy, it often features as a major component. Cluster policy offers a context in which networks such as those described above can be established, as local networks develop within clusters [24]. A comprehensive literature on clusters studied the effects of clusters and cluster initiatives on firm performance and their contribution to regional development. While understandings of what constitutes a cluster vary, a relatively common definition is that clusters are spatial concentrations of companies from the same or related industries and other organizations such as research institutes and support agencies [25–29]. Clusters can have beneficial effects on SMEs' innovative activities but another set of possible effects of spatial agglomeration in clusters is upgrading competitiveness through improved efficiency. In this paper, we take a broader perspective focusing on both static and dynamic efficiency of SMEs in clusters which includes but is not limited to their innovative capacities.

Cluster theory has evolved into a wide field of research, while cluster policy used to be the domain of practitioners. Between the two fields, there has been a considerable gap in analytical rigor [30]. One example is the divergence between bottom-up and top-down clusters. The clusters described initially by Porter are bottom-up initiatives and, thus, are privately led developments based on mutual trust and often some degree of cooperation between actors. Yet, incentives for participation in top-down initiatives are very different from those for bottom-up initiatives. As they are not based on the social capital invested by cluster members but rather on clear financial incentives provided by the financier, they seem to have less positive effects [31,32]. Nevertheless, in transition countries, governments and donors continue to support top-down cluster development and to produce handbooks on cluster development to ensure a rapid copy-pasting process [29,33,34].

While in recent years a growing strand of literature has tried to bridge the gap between cluster theory and policy [35], practitioners still often draw mainly on Porter's [36] groundbreaking but somewhat vague and older work, while notions such as institutional voids and their relevance for cluster policy tend to be ignored.

At the same time, the imprecise nature of a part of cluster theory (including Porter's work) has drawn criticism. For example, Martin and Sunley [37] have highlighted the major shortcomings of much of cluster thinking and especially of the vaguely defined nature of interrelationships in Porter's widely-cited diamond model, and claim that the topic has "become a world-wide fad, a sort of academic and policy fashion item." [37] (p. 6). McDonald *et al.* [38] even demonstrated that there is limited evidence for typical Porter-type clusters and that not all clusters are linked to international competitiveness and employment growth.

These shortcomings call for more rigorous analytical frameworks for cluster policy which describe more precisely how clusters or cluster initiatives work and how they can contribute to upgrading SMEs' competitiveness. The notion of institutional voids can contribute to a more rigorous cluster policy by suggesting mechanisms linking cluster services and identified deficiencies in an economy's institutional context.

Further refining cluster policy according to the developmental context of the economies they are embedded in is another way towards achieving more rigor. While clusters in developing countries have attracted the interest of researchers since the end of the 1990s (e.g., [39]), the specificities of clustering in transition countries merit particular attention since they offer peculiar challenges to SMEs. Some works have discussed the case of post-socialist economies, including, for example, the social capital present there and evolutionary processes in the institutional context of these economies [39]. More than two decades after the fall of the Soviet Union and the subsequent highly divergent pathways different post-socialist economies have taken, steps toward a general theory on cluster policy in transition countries (including but not limited to post-socialist countries) are promising because they direct attention to the specificities of transition itself, while certainly leaving enough flexibility to allow for the specificities of each individual country. In our view, the notion of institutional voids can serve as a building block towards such a theory.

### *2.3. Research Framework Cluster Policy and Institutional Voids*

The literature on institutional voids stresses that voids exist because intermediaries are missing or are inappropriately designed. At the same time, intermediaries can bridge existing voids in the institutional environment [1,15]. Clusters have very similar functions as intermediaries identified in the literature on institutional voids, especially when clusters are formalized in cluster initiatives.

Neither does the mainstream cluster literature focus on the influence of the institutional environment on the cluster development, nor does the literature on institutional voids explain clusters as a potential instrument to bridge such voids. Our research framework thus aims at linking these two literature streams as we see great potential for synergies. Figure 3 displays our understanding of clusters as a bridge for formal and informal institutional voids. As North [2] discussed, the institutional environment has a formal and an informal layer. Hence, voids in the institutional environment can be formal or informal.

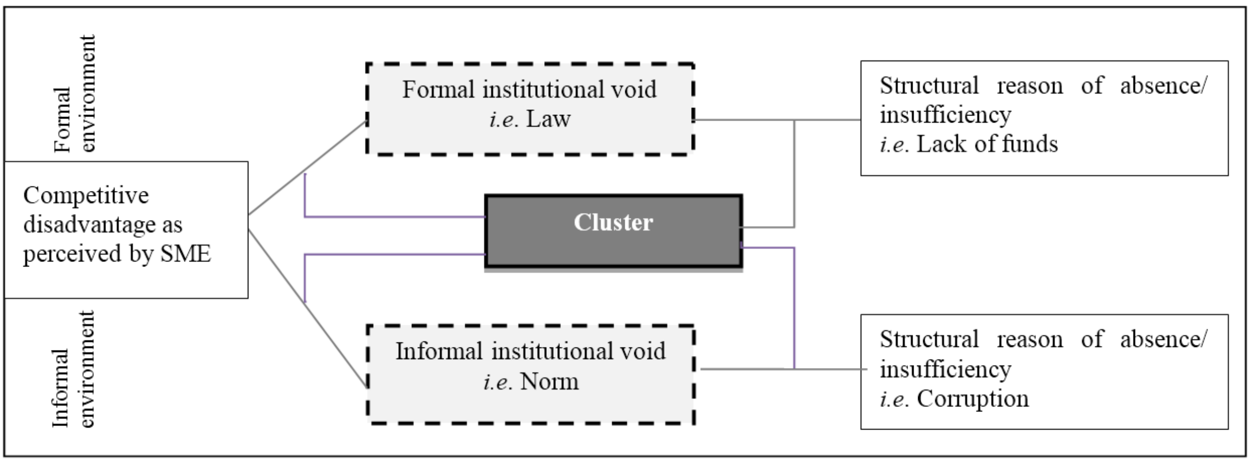


**Figure** 3. Research framework (Adapted from [4]).

When discussing institutional voids in transition countries, it makes sense to distinguish between those voids that exist *because* of the transition underway and those that do not since they are more fundamental. The first kind of institutional voids relates to what Grabher and Stark [40] (p. 542) call "transformation costs", while the second type is more similar to transaction costs as known from New Institutional Economy [41]. Importantly, contrary to neoclassical perceptions, political and economic transitions will not come without any friction but are certain to incur some transformation costs [40] (p. 542). Therefore, in addition to the role of cluster policy everywhere in bridging fundamental institutional voids to reduce SMEs' transaction costs, cluster policy in transition countries will have to assume the additional role of bridging transition-related institutional voids leading to transformation costs.

## 3. Case Studies

To illustrate the role of clusters in bridging institutional voids in transition countries, this section contains two case studies on cluster policies in transition countries of different kinds. The first case study deals with clusters in Serbia, a "classical" case of transition from one political and economic system to another, while the second case study sketches the current transitional context in Tunisia and mentions the role clusters are attempting to play in helping companies cope with it.

Cluster policy is relevant for both countries. Firstly, because of the development challenges both countries face, possibilities for achieving higher economic growth and employment have to be pursued; Secondly, spatial polarization and agglomeration of a number of economic activities and sectors is prevalent in both of them, as in most economies worldwide. Thirdly, making use of agglomeration economies provides a rationale for pursuing cluster policy. Yet, cluster policy has to address the specific deficiencies existing in an economy—such as institutional voids. The question of how well cluster policies are adapted to the (institutional) specificities of the economies in which they are applied is thus at the heart of the potential for effectiveness of cluster policy.

Comparing these two cases is promising for a number of reasons. The transition contexts of an Eastern European former socialist country and an Arab country undergoing currently fundamental transformations suggest comparable difficulties of SMEs in overcoming institutional voids due both to former systems' inefficiencies and to the transformation process itself. Both countries are close to European markets and exhibit political and economic elites oriented (at least to a certain degree) towards Europe. The longer-term institutional similarities between formerly centrally-planned Eastern European economies and Arab economies are evident from comparisons in the literature (e.g., [42]). While this holds equally true for other Western Balkan and North African countries, Serbia and Tunisia are two particularly interesting cases. Both have experiences with revolutionary uprisings that toppled authoritarian regimes and were motivated by high hopes of economic as well as political changes. In both cases, underlying economic difficulties have proven more difficult to resolve. Furthermore, despite its more recent revolutionary experiences, Serbia does not share other Eastern European countries' history of shock-therapy market reforms. Serbia's transformation to a market economy has been a long and difficult process that was stunted by the Balkan wars of the 1990s during the Milošević era. This long-term transformation process bears considerable similarities with Arab economies' economic transformations that have been going on since the mid-1980s and which will be further described below.

At the same time, different historical trajectories limit the comparability of the two countries. This is an additional reason why we believe comparing the two cases provides important insights for cluster policies. Since the "one size fits all" attitude often evident in cluster promotion has correctly been criticized in the cluster literature (e.g., [43] (p. 327)), an awareness for the specificities of each national and regional context is indispensable for cluster policy. Despite their comparable transition contexts, our two case studies intend to highlight not only the similarities but also the differences between the roles of cluster policy in bridging institutional voids in different transition countries.

### *3.1. Methodological Approach*

This article is based on two case studies. The case study approach, as one of the major qualitative research methods, has been widely applied [44,45]. The use and appropriateness of single as well as multiple case studies have been intensively discussed in the literature [46–49] with the result that single case studies—as well as multiple cases of less than five cases—may not allow for generalization but, nevertheless, contribute to theory and construct development as they provide a richer and more detailed analysis of the research matter. The present case studies, following a comparative logic, are developed according to the recommendations of Yin [45], Eisenhardt [46], and Gibbert *et al.* [50] for rigor in case study writing.

The two case studies follow two distinct methodologies, as they are parts of separate research efforts. While the different methodologies somewhat limit the direct comparability of the two cases analyzed, the case studies can still offer some insights on commonalities and differences between the transitional contexts prevalent in Serbia and Tunisia, and between the roles clusters do or can play in bridging institutional voids resulting from different transitional contexts.

The case study of Serbia is based on a participant observer approach, combined with interviews and secondary data. The participant observer approach is an inductive strategy that aims at exploring complex relations among events. An observation is "the systematic noting and recoding of events, behaviors, and artifacts in the social setting" [44] and is fundamental to qualitative research. The approach aims at a holistic understanding of the situation. The researcher worked frequently in Serbia over a period of two years and made observational protocols and notes during these trips.

An "observer as participant stance" [51] approach was followed, implying that the observer role was the predominant role and the studied group was aware of the particular role of the researcher and did not consider the researcher as a full member of their group [52]. The group analyzed consisted of one specific cluster and the predominant cluster policy makers in Serbia. The cluster, as well as the policy makers, was approached through existing ties of key informants and, hence, all approached interviewees and commentators participated in the research. Six interviews were taped, transcribed, and coded. These recorded interviews followed a semi-structured interview guideline [53] and were held in the English language, which is a secondary language for the researcher as well as the interviewees. One interviewee was a cluster manager, while the other interviewees held higher management positions of the respective companies, either as CEOs or General Managers. All interviewees were male and had at least one university degree. The companies differed in size, but were all from the same industry in the same region of Serbia, as to eliminate regional discrepancy factors. Besides one which was taken as a control interview, all companies were members of the same cluster. The interviews lasted on average 34.24 min. Notes were taken of the remaining interviews and discussions. These discussions happened on several occasions such as during regional cluster conferences with policy makers.

Subjectivity and researcher bias are the most commonly mentioned limitations of this research design. As this method follows an inductive approach, it is based on the interaction of the researcher with the research subject. Hence, subjectivity is not a disruptive factor, but an essential component. Hence, further data, such as secondary data from reports and further studies, increase the validity of the observations [51].

The Tunisia case study draws on ongoing research on institutional frameworks for economic structures and policies in the Middle East and North Africa. The case study builds primarily on theoretical work from Middle Eastern political economy which is highly relevant for the prevalence of institutional voids in the current transitional context in Tunisia (e.g., [54–57]). Research on clusters in Tunisia (*pôles de compétitivité*) is mainly based on available literature on Tunisian economic, science and technology and innovation policies, and therefore to a certain degree assumes the character of a meta-study. While such a methodology cannot claim to answer all questions related to the role of clusters in bridging institutional voids completely and precisely, it offers the chance to connect macro-level research on the transitional state of the Tunisian political and economic system with meso-level conclusions drawn from available research on cluster policy in the same national context. Thus, it leads to some stylized facts that can guide further research. This is in line with our intention to contribute to a research agenda for the role of clusters in bridging institutional voids in transition countries.

### *3.2. Serbia*

The following section gives an overview on cluster policy in Serbia, drawing on Schrammel [53].

#### 3.2.1. Formal and Informal Institutional Context

Serbia used to belong to the Socialist Federal Republic of Yugoslavia (SFRY) until 1992. After the outbreak of the independent wars, Serbia formed the Federal Republic of Yugoslavia. After Montenegro's independence in 2006, Serbia became the only legal successor of this federation. In 2008, the autonomous region of Kosovo unilaterally declared independence from Serbia, which is still a politically sensitive topic to date. Political instability including an arms and trade embargo imposed by the United Nations severely affected the economy. Furthermore, air strikes on Serbian military facilities also affected strategic infrastructure and heavy industry bases [58].

In 2007, Serbia became a member of the Central European Free Trade Agreement. In 2008, the EU and Serbia finally signed the Stabilization and Association Agreement. In 2009, the EU accepted Serbia's application for candidate status. Serbia became an EU candidate in 2012 after fulfilling conditions of the International Criminal Tribunal for the former Yugoslavia. As a new EU candidate country, Serbia receives funds from the EU's Instrument for Pre-Accession Assistance (IPA), which is partly invested in cluster support.

Formal Institutional Environment

The NATO airstrikes delayed the modernization of the ICT infrastructure network. The concentration of telephone landlines is still significantly lower in Serbia than in neighboring countries [59]. However, ICT Infrastructure is on the rise in the past years. According to the Gallup Organization [60], roughly half of the households in Serbia had internet access in 2012. Still, this does not seem to seriously affect the ICT industry. ICT companies in Serbia concentrate in urban centers where ICT infrastructure is significantly more developed than in rural areas [61].

Serbia's legal system is transitioning while the country is adopting the *acquis communautaire* of the European Union. Most of the relevant laws are in place [58] but companies still face difficulties in contract enforcement. At courts, due to lacking capacities, a backlog of cases prolongs procedures and leads to delays in contract enforcement. Companies view this as the major obstacle [58]. This is reflected in common international indicators. The World Bank ranks Serbia 96th worldwide on contract enforcement, reporting that it takes 635 days and 34% of the claim to enforce a contract [62]. Similarly, the Bertelsmann Foundation ranks Serbia's judiciary independence and prosecution of office at a medium transformation level [63]. Referring to Figure 1 discussed earlier, the adaption of the *acquis communautaire* creates a situation typical for transition countries. Formal institutions are introduced that do not necessarily fit to the informal institutional environment and the social practices. However, the Serbian state is improving. Interviewees report that the situation is advancing but trials still take a considerable amount of time. These resulting delays entail a degree of impunity [61].

Another severe problem reported by companies is the unsatisfactory payment behaviour prevailing. Informants complain that government-owned enterprises in particular are known for late or incomplete payments, and that private companies have very limited possibilities to enforce a contract. This is in line with international reports on corruption practices in Serbia. Corruption is prevalent at all bureaucratic levels of the Serbian administration. The Gallup Organization reveals that 84% of the Serbian population consider corruption to be widespread in government [60]. This in turn leads to inefficient procedures and low capacities within the administration. The judiciary is affected to a degree equal to that prevalent in the other branches of government. To sum up, contract enforcement in Serbia is problematic but improving. However, the described difficulties are also believed to hamper foreign direct investment in Serbia [61].

The Serbian education system is performing below the regional average. In the last PISA study, Serbia achieved in average 442 points in the reading test [64]. Informants report that skills taught at universities do not correspond to the demands of the labor market, and that substantial on-the-job training is needed before employees can be considered productive [53]. This is in line with the Gallup Organization's research which found that only half of the Serbian population is satisfied with the education system [60].

The Serbian capital market is following international standards and managed the world economic crisis relatively well [65]. The Bertelsmann Foundation attributes the Serbian banking system a grade of 9 out of 10 points and the World Bank ranks it at 52nd in the global ranking [62,63]. The depth of credit information is said to be suitable with a rating of 5 out of 6 points. However, seed and start-up financing such as venture capital financing barely exist, which corresponds to the low share of innovation in the market [61]. Observers attest a "cartel position of the banking sector" [66], as well as weak protection of creditors. SMEs report that venture capital, start up financing, or even loans from banks do not exist or are hardly accessible for SMEs, hence institutional arrangements are missing.

Informal Institutional Environment

SMEs commonly find it difficult to obtain information. Only 37.4% of Serbians have confidence in business organizations [60]. Interviewees report that information is often acquired through informal connections. For example, one company representative states:

> "I heard from many people that you need to have special relationships, [...] to get proper information." [67]

In a similar sense, international reports state that the attitude towards free expression and objective information provision has declined and is rated with a grade of 6 out of 10 by the Bertelsmann Foundation [63].

The lack in soft skills seems to be more pressing than the actual gap in technical skills. In 2008, companies stated that around 64% of IT professionals are lacking soft skills and that 12% lack basic skills in contrast to 24% who lack technical skills [61]. In contradiction to this finding, research by the Gallup Organization reveals that 20.9% of Serbs trust their co-workers a lot and that even 47% trust them somewhat, which are the highest numbers in the sample [60].

In sum and relating to the first part of our research question, Serbia exhibits institutional voids, entailing transformation costs [40], at the formal and informal level, with the formal voids apparently being most pressing, due to the mismatch between formal and informal constraints. Voids in the ICT infrastructure seem to be minimal compared to larger voids in the product, labor and capital markets. The largest and most pressing void is that in the product market, specifically the weak infrastructure to enforce contracts.

#### 3.2.2. Serbian Cluster Policy Targeting Institutional Voids

Cluster development in Serbia began in 2004 and was a major component of the "National Strategy of Economic Development 2006–2012", the "Development Strategy of SMEs 2003–2008", and the "Strategy and Policy of Industry Development 2011–2020" [66]. Since 2012, the Serbian government has implemented a quite developed and structured cluster initiative including a rating exercise of clusters depending on their development phase. A well-structured cluster development strategy was elaborated under the oversight of the Ministry of Economy and Regional Development, and 23 clusters were identified. Most clusters had a regional focus [57,60].

Serbian cluster development was strongly influenced by the EU competitiveness agenda and the "Triple Helix" approach [54]. With the support of foreign donor organizations, Serbia focused relatively early on a "bottom-up" approach of cluster development. Hence, existing regional agglomerations were identified and only partly supported by the cluster development programs [66]. Business associations and networks have a long historical tradition in the country [68]. However, financial support by the ministry is less than 300,000 € per year for all clusters in Serbia. Cluster development programs over the years only funded 50% of the costs. The clusters had to be able to co-fund the remaining 50% [68].

The limited funds provided by the Serbian government meant that most clusters are based on the entrepreneurial spirit of individuals and of groups of companies [69].

Additionally, the Serbian government launched a cluster manager training course with seven modules. Furthermore, the regional development agencies in Serbia, as well as foreign donors, had a crucial role in technical assistance and the provision of trainings for clusters [57,69]. This contributed to bridging some of the education-related voids described, as most of the training dealt with new management techniques.

The bottom-up approach of Serbian cluster policy led to a diversified cluster landscape. As clusters had to be co-financed, they predominantly engaged in actions that their members would be willing to pay for. Due to limited funds, cluster management usually consists of only one person who has the possibility to grow his/her management teams through raising additional funds. The cluster manager is funded through membership fees, which creates incentives for the management to develop services that benefit companies directly by bridging institutional voids. As companies show more willingness to pay for solutions to pressing problems they face in their day-to-day business, clusters had to be creative in developing services to bridge institutional voids [4,53]. For example, one cluster responded to the formal information void by providing strategically positioned information management, e.g., by compiling a study on the Serbian ICT market. Furthermore, the cluster runs an up-to-date website with information on calls, events and news. In addition, the cluster manager has a reputation for being well informed and well connected, as one company representative stated:

> "There is one, not formally defined, service: providing information, different consultations. I can ask to the cluster manager to provide me information from our government or governmental institutions or maybe he is linked to other IT companies. So if we need to establish contact with someone to get some information it's good channel to use cluster." [67]

Furthermore, clusters engage in the provision of specialized human capital. Besides offering training to cluster members, some clusters address political issues, hence, substituting policy functions, as one cluster manager recalls:

> "So what we are trying to do is, on one hand we are doing campaigns and popularisation of IT-professionals because we believe that—and it's definitely true—we have too many economists, doctors and lawyers in this country. Also, we have established our own cluster academy where we want to create (.) to try to bridge the gap between the times that our IT-preposition will results in few years" [70].

Another example is a cluster bridging the contract enforcement void through a "court of honor" at least for business conducted between its members. The members have agreed to follow a code of ethics, and the management board of the cluster can step in as a court of honour in case of any violations to that code. The cluster manager states that the establishment of these procedures, apparent peer pressure and the threat of sanctions through possible negative reputation effects are strong enough to counteract any violations [70].

Relating to the second part of the research question, Serbian cluster policy is directly addressing one void in the labor market by providing specific management training and technical assistance to cluster managers. Other voids are not directly addressed by the national cluster policy. However, the bottom-up and co-financing design of Serbia's cluster policy encourages cluster managers to develop their services and organizational design according to members' needs and requests. This leads to the development of cluster services with the potential to bridge institutional voids. The most impressive example is the "court of honor" system one cluster established in order to counter the void in contract enforcement.

### *3.3. Tunisia*

The following section gives an overview on cluster policy in Tunisia, drawing on Benner [71,72].

#### 3.3.1. Formal and Informal Institutional Context

Tunisia is undergoing a profound political transition process since the revolution that ousted President Ben-Ali in January 2011. While Tunisia is not confronted with a transformation of its economic system comparable to Eastern European countries such as Serbia, there is a second layer in its transition process which calls for even deeper and more complex reforms than does the political layer.

##### Formal Institutional Environment

The formal institutional context in Tunisia is not unlike that found in other transition countries. For example, Adly and Khatib [73] (pp. 41–42) state "that property rights, contract enforcement and the rule of law have been traditionally weak in (…) Tunisia". The World Bank ranks Tunisia on place 78 in its global index, implying it takes 565 days, and costs 21.8% of the claim to enforce a contract [74], which is slightly above the average in the MENA region. According to the Bertelsmann Foundation transformation index, independence of the judiciary is moderate with a grade of 5 on a 1–10 scale, indicating medium transformation status [75]. Access to finance, land and infrastructure has been unequally distributed in favor of some market actors at the expense of others." In their survey of Tunisian entrepreneurs, Adly and Khatib [73] (pp. 117–120) find evidence for considerable problems in contract enforcement in Tunisia, including perceived deficiencies in laws and regulations, distrust in the judicial branch, and vulnerability of formal contracts to corruption. Another formal limitation noted in the survey is weak protection for competition:

"Seventy-nine percent of the respondents "completely agreed" with the statement that laws and regulations in the field of competition were deficient and suffered from major flaws. However, another significant percentage (71 percent) stated that the problem was more with the implementation and enforceability of laws and regulations than with the laws themselves" [73] (p. 121).

Difficult access to finance is another formal institutional void in Tunisia that is not uncommon for transition countries. The World Bank ranks Tunisia at116th in its global ranking out of 189 countries [74]. Among the World Bank indicators, getting credit appears to be the largest problem in doing business in Tunisia, hence, similar to the Serbian case, institutional arrangements are missing. However, access to bank credit appears to have improved lately due to the expansion of promotional banks targeting startups and SMEs such as the *Banque Tunisienne de Solidarité* and the *Banque de Financement des Petites et Moyennes Entreprises* [73] (pp. 127–142).

Informal Institution and the "Arab Social Contract"

The informal institutional context in Tunisia cannot be separated from its revolutionary transition and the wider economic structural problems that have presumably contributed to political events. While the causes of the revolution were manifold, discontent with the economic situation and, in particular, the lacking employment prospects of the young generation—exacerbated by enormous spatial disparities—figured prominently [55,72]. The institutional backdrop of these structural economic problems is what Amin, Assaad *et al.* [55] (p. 17) call "the unraveling of the Arab social contract", an implicit institutional arrangement, informally embedded, between former authoritarian regimes and the population centered on a strong economic role of the state and a strong emphasis on the provision of welfare and public-sector employment to citizens who in return waived claims to meaningful political participation [54–56].

Altenburg [76] characterizes Tunisia under the Bourguiba and Ben-Ali regimes and thus during the validity of the Arab social contract as neopartimonial, a system in which "the ruling elites employ patronage and political clientelism systematically to create and preserve their legitimacy" [76] (p. 1). Due to widespread patron–client relationships such regimes rely on, a well-connected business elite emerges which may prevent the economy from developing in the most efficient way: "If governments derive their legitimacy systematically from patronage and clientelism, it greatly increases the risk that rents are created for political supporters rather than to maximize welfare" [76] (p. 8). In particular, a neopatrimonial system may often tend to discourage entrepreneurship because regimes typically favor a small and well-connected part of the business elites and protect them against competition by not-so-well connected newcomers. Benalist Tunisia with the strong grip of Ben-Ali's extended family on the economy [77] (pp. 822–823) and the resulting limitations on competition by newcomers well illustrate this point. Still, the Bourguiba and Ben-Ali regimes pursued economic policies that allowed a certain degree of entrepreneurial activity and the rise of a middle class, while at the same time co-opting labor unions and business associations [77]. Remarkably, the public support structure for entrepreneurs in Tunisia is highly developed in comparison to other countries in the Middle East and North Africa and included promotional banks, incubators, and business centers [73]. The Ben-Ali regime's policies toward the private sector appear inconsistent. In one sense, this policy mix confirms the neopatrimonial character of these regimes and the basic tenets of the Arab social contract: the regimes tolerated independent economic activity to a certain degree (and even more so when the problem of high youth unemployment came increasingly apparent), but only as long as and under the condition that it did not endanger their authoritarian rule and the entrenched position of cronies.

In such a context which Adly and Khatib [73] (p. 40) describe as "capitalism without entrepreneurship", several institutional voids are apparent which are especially severe for new entrepreneurs and for SMEs too small to gain access to the well-connected business elite. Contract enforcement may be difficult because of selective approaches by the state in favor of well-connected business elites. Information provision is highly deficient because of the inherent lack of transparency of a neopatrimonial economy which also hinders effective partner search. Those who are part of the established business elite close to the regime and engaged in patron–client relations with the state and bureaucracy have access to relevant information and to networks connecting them with each other, but new entrepreneurs and SMEs are closed off from these information channels and networks. Capital provision may also be skewed toward those economic actors who are close to the regime. Adly and Khatib [73] (pp. 41–42) confirm this by stating that "liberalization only led to the emergence of some kind of booty/crony capitalism where access to resources was arbitrarily confined to a few politically hand-picked cronies". More specifically, in their study among Tunisian entrepreneurs, they found general agreement "that state officials are biased to certain firms and businessmen" and "that the state is biased to certain economic actors at the expense of others" [73] (p. 121).

Another institutional void relates to the labor–market mismatch that is apparent in the high levels of youth unemployment in Tunisia, as well as in most other Arab economies. The World Bank [78] (p. 12) cites estimates that "show that the youth unemployment rate is as high as 40 percent in Tunisia and even higher in inland governorates." This mismatch is an indirect outcome of the Arab social contract. Amin, Assaad *et al.* [55] (p. 61) state that regimes used "formal education (as) a means by which governments trained manpower for the civil service as part of modernizing their administrations". The offer of formal education was therefore skewed towards public-sector needs, while expectations of future public-sector employment among young people ensured the demand for education was so, too. The outcome was a considerable expansion of university education and what Richards and Waterbury [54] (p. 128) call "a populace obsessed with the respectability of university education and white-collar jobs." Private-sector oriented technical and vocational education and training, on the other side, received much less attention, resulting in large numbers of "students who may have to be retrained by their employers" [54] (p. 129).

The breakdown of the Arab social contract is another and more acute cause for the institutional voids Tunisian entrepreneurs and SMEs are confronted with in recent years. During the 1980s, the central precondition of the functioning of the Arab social contract—the ability of the state to guarantee its citizens employment in the public sector—became increasingly difficult or even impossible to maintain in most non-oil producing Arab countries. This was mainly due first to budget constraints and the need for fiscal austerity which made the maintenance of bloated public sectors unrealistic, and second due to demographic developments. High rates of population growth resulted in young populations, meaning effectively that ensuring employment of young generations required either very high rates of economic growth, or—under the Arab social contract—further expanding the public sector. GDP growth, however, did not strongly increase in the 1980s but instead even slowed down in some Arab countries. Tunisia well exemplifies this point: while it enjoyed average rates of GDP growth of 4.7 and 6.8 percent in the periods between 1960 and 1970 and between 1970 and 1980, respectively, growth decelerated to an average of only 3.3 percent in the decade between 1980 and 1990 [54] (p. 59). At the same time, fertility rates decreased significantly over time. While the fertility rate in Tunisia stood at 6.0 births per women in the decade 1970 and 1980, it fell to 4.5 births for the period between 1980 and 1990 [54] (p. 73). Notwithstanding the considerably quick demographic transition apparent from them, these data imply high rates of population growth and a young population. Speaking of Arab countries in general, Amin, Assaad *et al.* [55] (p. 55) report that "nearly 55 percent of the population is under the age of 24 andtwo-thirds are under 30." This mix of young and growing populations, slower economic growth, and increasingly limited abilities of states to offer young generations public-sector employment led to the breakdown of the Arab social contract in the 1980s [54–57].

In essence, institutional voids related to Tunisia's transitioning state are due to two interrelated but different transition processes: First, the political transition under way since the revolution of 2010/2011 and second, the economic transition towards finding a new economic model going on since 1980. The second transition can be regarded as the basis for the first one. While the second transition may be less visible than the first one, it is the much more complex one. Since the old ways and means of the Arab social contract do not function any more, entrepreneurs and SMEs are confronted with the challenge to subsist in a transitioning economy—and in a transitioning political environment, too, whose future configurations they do not yet know. As in the Serbian case, the changes on the formal institutional level did not sufficiently consider the informal embeddedness, such as the Arab social contract, entailing institutional voids. Institutional voids left from the Benalist era such as the formal ones noted above and informal ones related to the former Arab social contract (*i.e.*, lack of information and access to networks, labor-market skills mismatch) still exist. At the same time, entrepreneurs now face the high uncertainty related to highly complex economic changes whose outcome it not at all clear, and the uncertainty of the political transition process. While the end of the political transformation process may formally have come with the adoption of the new constitution and the democratic presidential and parliamentary elections, its stability and the long-term equilibration of the political and administrative system will take many more years. Analogous modifications in the economic sphere, in contrast, are likely to take decades.

Coming back to the first part of the research question, Tunisia exhibits the mismatch between the different levels of the institutional environment described in Section 2.1. This mismatch is observable in both formal and informal institutional voids. While the formal institutional voids related to contract enforcement, access to finance, the rule of law, and competition are rather typical for transition countries, the informal institutional voids related with the economic transition due to the former "Arab social contract" and its breakdown are probably even more critical for SMEs' long-term competitiveness and for entrepreneurship dynamics. They constitute what Grabher and Stark [40] (p. 542) call "transformation costs". Such informal institutional voids include notably the lacking access of SMEs and of entrepreneurial newcomers to information and networks and the mismatch between skills and requirements on the labor market.

#### 3.3.2. Tunisian Cluster Policy Targeting Institutional Voids

Tunisian cluster policy has already been pursued under the Ben-Ali regime and continues until the present day. Beginning with the formation of export consortia, an explicit policy of cluster promotion was established in 2007/2008, beginning with a study for a new industrial strategy for the period until 2016. In the study, clusters were defined as networks oriented towards innovation with a sectoral and spatial perspective. The study put the focus on textiles and garments in Monastir, agribusiness in Bizerte, and information and communication technologies in Sfax [79] (p. 25).

The government's subsequently established cluster program was somewhat different and broader than the approach advocated in the study. The so-called *"Pôles de compétitivité"* focus on the sectors of mechatronics, textiles, leather processing and shoes, agriculture, and information and communication technology. Cluster sites are located in proximity to existing industrial centers, infrastructure, research and development institutes, or educational entities such as universities or faculties. Clusters promoted under this scheme include the Bizerte agriculture cluster, the Sidi Thabet biotechnology cluster, the Borj Cédria energy and water cluster, the El Ghazala and Sfax information and communication technology clusters, the Sousse and Gafsa mechatronics clusters, and the Monastir textile cluster. *Pôles* comprise different elements such as industrial estates, organized networks, and large-scale technoparks regulated by a specific legal framework. Each *pôle* is managed by a management company with professional staff. Management companies can be public, private, or hybrid. They are supposed to function as one-stop shops for providing business development services to cluster companies. Networks managed by the *pôles* are often called "clusters" despite them not necessarily being spatially delimited. One of their major aims is initiating collaborative projects between member companies. The establishment of more of these networks under the umbrella of the *pôles* has been ongoing for a couple of years and the foundation of additional ones is planned. The *pôles de compétitivité* program loosely follows the French cluster policy with the same name. Corresponding with the French model, Tunisian cluster policy is planned in a top-down way, with the central government designating *pôles de compétitivité* to be established and promoted. The establishment of networks called "clusters" was initially supported by the French development cooperation which accompanied the foundation of the Sousse *pôle's* "cluster" network. Partnerships with French (and Moroccan) clusters and *pôles* exist [79–81].

The *Pôle de compétitivité* Monastir-El Fejja la Manouba (Mfcpole), for example, is a cluster initiative that includes a technology park for the textile industry, two industrial sites, and a formal business network called *In'Tex* designed to link companies and supporting institutions (e.g., research and development institutes, training institutes, universities) and to improve collaboration between these actors. Another network managed by the *pôle* is the "*Cluster Textile technique Tunisie*". Mfcpole offers business development services for start-ups (e.g., assistance in business planning). The Monastir technology park offers various services and facilities to its tenants including laboratories, conference rooms and exhibition halls [79–82].

As the example of Mfcpole shows, the *pôles de compétitivité* combine service provision, networking, and spatial agglomeration. According to the understanding of the initial study, the notion of "cluster" is used for networks which are managed by the *pôles.* Concerning the necessary spatial aspect of agglomeration, the other elements of the *pôles* such as the technoparks and the industrial estates are closer to the understanding of clusters in the literature.

In any case, the *pôles* provide a wide range of services to promote clustering. They can be regarded as an attempt to bridge some of the institutional voids prevalent in the Tunisian economy. While the precise configuration of *pôles de compétitivité* and the needs of enterprises in different industries (depending, for example, on their size, degree of internationalization, export orientation, age, and other determinants) may well vary, the networking options provided by *pôles de compétitivité* offer constituent companies a possibility to bridge the institutional voids of lacking information and access due to many of them—and especially SMEs and start-ups—not being part of well-connected established business elites that were so prominent under the former Ben-Ali regime. In the current transitional situation, access to information and networks offered by the *pôles* may well have the additional importance of overcoming or coping with the existing uncertainty related to the political and economic transformation processes. Admittedly, the degree to which these ends are met depends on how well networking in *pôles de compétitivité* works. This is certainly a continuous challenge in managing *pôles*. In addition to formal networks offered by *pôles*, local co-location in technology parks and industrial sites may serve the same networking functions, albeit in a more informal way.

The business development services *pôles de compétitivité* like Mfcpole offer for start-ups can be viewed as attempts to overcome the institutional voids related to the deficient entrepreneurial culture after decades of neopatrimonial rule which (at least implicitly) discouraged entrepreneurial initiatives by entrepreneurs outside established and well-connected business elites. While business development services like assistance in drawing up business plans may certainly have its merits and have become part of the standard repertoire of promoting local and regional economic development almost everywhere, socio-institutional realities like a deficient entrepreneurial culture and attitudes are hard to change and require—if anything—long-term and fundamental policy choices that are probably well beyond the reach of cluster policy and management. For example, preferences and expectations of university graduates towards public-sector employment are a strong force against entrepreneurship that have to be tackled on the macro level.

*Pôles de compétitivité* can help bridge these macro-level institutional voids through lobbying. Due to the strong top-down orientation of cluster policy in Tunisia, its role in giving enterprises a voice in economic policy through lobbying appears somewhat questionable.

While the Tunisian *pôles de compétitivité* do contribute to bridging some institutional voids companies and particularly SMEs and start-ups are confronted with, there are others to which more attention by cluster policy will be beneficial. In particular, the labor-market mismatch is a major problem in the Tunisian economy (as in most Middle Eastern and North African economies). While attempts to introduce new training schemes such as those oriented at the German model of dual technical and vocational education and training have been made in Tunisia, *pôles de compétitivité* may be in a good position to take part in cooperative training schemes encompassing both vocational schools and enterprises. Creating links between companies and universities does not only make sense for technology transfer, but also to align labor–market supply and demand more closely. Including vocational schools and training centers in cluster structures and networks or even setting up formal cooperative training schemes organized by the *pôles* can lead to interesting institutional experimentation and engender new models of attacking the labor–market mismatch in Tunisia.

Still, the role of *pôles de compétitivité* in bridging institutional voids related both to the left-overs of the former Ben-Ali regime and to the prevailing uncertainty in the current transitional context should not be overestimated. Their ability to help bridge some immediate institutional voids, notwithstanding the institutional environment for enterprises in Tunisia, is characterized by some more fundamental voids. Bridging them will require long-term macro-level policies. While *pôles de compétitivité* can bridge institutional voids on the meso-level, coherent macro-level initiatives are needed that should not contradict the role of clusters in improving the business environment for enterprises (and *vice versa*). *Pôles de compétitivité* can play a certain role in lobbying for such macro-level policies but their potential to do so seems limited due to the top-down orientation of Tunisian cluster policy. Hence, allowing for the bottom-up formation of cluster initiatives is important. The French example which has informed the Tunisian cluster policy in relation to the *pôles* might be instructive. In addition to the French *pôles de compétitivité,* the French government has created a second pillar of its cluster policy by stimulating local cluster initiatives that are benefitting from bottom-up dynamics. These *grappes d'entreprises* might be an interesting model for Tunisia, too. Involving actors independent from the state such as local business associations could be a starting point.

In the medium and long term, however, stronger institutional independence of *pôles de compétitivité* (and also of eventual bottom-up cluster initiatives such as *grappes d'entreprises*) might put them in a position to pursue effective advocacy for the needs of constituent enterprises and particularly SMEs and start-ups. The current transitional environment and related democratization and decentralization efforts offer a chance for such a role of *pôles.* Much will, however, depend on their ability to achieve a certain institutional and organizational strength. If and when *pôles de compétitivité* succeed in bridging at least some meso-level institutional voids, it may become attractive for companies to contribute to their activities and to provide the necessary resources.

The second part of the research question on whether Tunisian cluster policy addresses prevailing institutional voids can only partly be answered so far. Tunisian cluster policy is not specifically targeted toward institutional voids in Tunisia. While a role of Tunisian *pôles* in bridging transition-related institutional voids constituting transformation costs [40] is not observable so far, some effects of cluster policy in bridging fundamental institutional voids are evident. While the service offerings of Tunisian *pôles de compétitivité* is quite typical for cluster initiatives around the world, they can still help overcome some of the informal institutional voids (e.g., lacking access to information and networking). Formal institutional voids related to issues such as contract enforcement, the rule of law, or the protection of competition would need to be handled at a macro level. The role of Tunisian clusters in lobbying for needed reforms in this regard appears somewhat questionable, although the current democratization and decentralization process in the political arena opens up a window of opportunity for clusters to take a more active lobbying role. Concerning the labor-market skills mismatch—arguably the most pressing institutional void in Tunisia—clusters have a chance to gain a highly relevant bridging role.

## 4. Conclusions

The two case studies demonstrate the difficulties clusters and cluster policies in transition countries often encounter when it comes to bridging institutional voids. As Williamson's concept demonstrated, transition processes naturally entail institutional voids as the timeframe of change varies between the formal and informal institutional environment. Hence, as the formal environment is actively addressed by policy makers in the transition country, the informal embeddedness of existing policies is often disregarded. These voids create competitive disadvantages for the companies in these countries. The disadvantages are even more severe for SMEs due to their limited resources. While in the long run institutional voids have to be treated at the macro level of the economy, clusters have a potential to bridge such voids in times of transition. Lobbying by cluster managers may be important for long-run treatment of institutional voids, but this appears difficult, notably in the case of a top-down designed cluster policy.

While our research aimed at casting some light on initial questions concerning the role of clusters in bridging institutional voids, many questions on the details of the functions of Serbian and Tunisian clusters remain. While it appears that bridging institutional voids in a comprehensive way was not an explicit rationale in the design of the two countries' policies (and presumably is not in many other transition countries either), it is still possible that cluster managers searching for ways to adapt their services more closely to the needs of member companies implicitly (and maybe unconsciously) align the functions of their cluster initiatives more to the role of bridging institutional voids. Even if our research methodologies do not allow for generalized statements, we believe that bottom-up designed cluster policies offer more room for such an alignment process. The example of the "court of honor" in a Serbian cluster is a highly remarkable case of the bridging function a cluster can perform, even in the case of a macro-level formal institutional void that at first sight appears difficult to address at the meso level.

An interesting but probably not surprising outcome of the case studies is that the supply of skills in demand on the labor market is an issue in the two countries analyzed, as is presumably the case in most other transition countries, too. In our view, it is worthwhile discussing possibilities for clusters to play a larger role in addressing skill mismatches on the labor market and in organizing apprenticeship programs, hence tackling institutional voids much faster than macro-level policy reform can. Especially transition countries, which need to scale up their economic power, can use these insights. Support through cluster policy can bridge institutional voids in the medium term and, hence, give governments more time to address the voids at a macro level.

The paper furthermore demonstrates the merits of an institutional economic geography perspective, arguing that cluster policies in transition countries disregard the institutional context and constraints brought about by the institutional change. As the Serbian case demonstrates, cluster members appear to be willing to pay a relatively high membership fee, if the cluster tackles their perceived competitive disadvantages. Cluster policy makers can use this insight by adapting an institutional economic geography perspective, analyzing the environment for voids, and then designing specific programs within clusters to bridge these voids.

Insights gained in the two case studies - in particular those insights related to commonalities and differences between the transitional contexts in Serbia and Tunisia, resulting institutional voids, and actual as well as potential contributions of clusters in bridging them - can guide further, more detailed studies. Future research, based on a single methodology, more detailed case study data, and further refinement of the research questions we tried to answer in this article, will shed more light on the role of clusters in bridging institutional voids in transition countries.

## Author Contributions

The authors contributed to sections 1, 2, and 4 equally. In section 3, research on Serbia was performed by Tine Lehmann while research on Tunisia was performed by Maximilian Benner.

## Conflicts of Interest

The authors declare no conflict of interest.

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