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Fiscality and infrastructures, fiscality as infrastructure: the role of taxation in the shaping of economic landscape in the Julian Alps (13th-15th century)

Tommaso Vidal

Abstract:

La tassazione è spesso considerata come un ostacolo e/o un vero e proprio freno allo sviluppo economico. Questo è tanto più vero per le società europee pre-industriali, la cui fiscalità era caratterizzata da un'estrema frammentazione e assenza di coordinazione. Con questo contributo proverò a superare questa interpretazione, mettendo in dubbio tanto l'idea che lo sviluppo debba corrispondere a centralizzazione e semplificazione dei processi economici, quanto la nozione della fiscalità come mero ostacolo allo sviluppo pre-industriale.

Usando dati da un registro doganale prodotto nella Alpi Giulie nel 1426-1427 proverò a dimostrare che l'area era caratterizzata da un sistema economico complesso e piuttosto integrato. Qui la fiscalità non era un ostacolo o un peso; era piuttosto uno degli elementi chiave che foggiò e influenzò l'integrazione economico. Intendo dunque analizzare lo sviluppo del sistema fiscale dell'area mettendo in evidenza il meccanismo di contrattazione politica che lo formò nella sua complessità e contingenza. Proverò poi a valutarne gli effetti sull'economia a un livello qualitativo e quantitativo.

Parole chiave: Italia Tardomedievale; Storia economica; Comunità alpine; Fiscalità

Taxation is often thought of as either an obstacle or a veritable hinderance to economic development. This holds especially true for pre-industrial European societies, whose fiscality was characterized by extreme fragmentation and lack of coordination. With this paper I will try to challenge this mainstrem inerpretation, questioning both the idea the development should correspond to centralization and streamlining and the notion that fiscality itself was only an obstacle to pre-industrial economic development.

Using data from a toll register produced in the Julian Alps in 1426-1427 I will try to argue that the area was characterized by a complex and fairly integrated economic system. Here fiscality was neither an obstacle nor a burden; in a more nuanced way it was one of the key elements that shaped and influenced economic integration. I will thus analyse the development of the fiscal system of the area, highlighting the complex and contingent mechanisms of political bargaining that shaped it. Then, I will try to asses its effects on the economy from both a qualitative and quantitative standpoint.

Parole chiave: Late Medieval Italy; Economic History; Alpine communities; Fiscality

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Oltre la frammentazione: spazi fiscali ed economici nell'Italia tardomedievale.

Fiscality and infrastructures, fiscality as infrastructure: the role of taxation in the shaping of economic landscape in the Julian Alps (13th-15th century)

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1. Introduction

When one is asked to think of the role of taxation in the economy as a whole, or even in relation to infrastructures, the most common ideas are probably the collection of resources, the financing of polities or, possibly, redistribution in the form of services.[18] The assumption that taxation – especially indirect taxation (i.e. on movement, consumption, sales, etc.) – could have a key role in shaping and defining economic, let alone political, spaces would hardly come to mind. If it did, it would probably resonate with negative overtones, since taxation and state intervention in the economy have been under assault by the culturally hegemonic neo-liberalism for quite some time in the present day. However, even different strands of economic thought forgiving to the role of polities and institutions in the economy, such as the New Institutional Economics (NIE), have come to identify fiscality or, to be fair, lack of fiscal coordination, as one of the classic obstructions to pre-industrial economic development.[19]

Such approaches show all signs of what Karl Polanyi famously defined as "formalism" a strand of thought whereby historical economic systems are supposed to work under the same basic rules, assumptions, and socio-cultural arrangements as our own – historically-born – capitalist system.[20] To summarize a rather lengthy debate, Polanyi shrewdly observed that both economic behaviour and economic structures should be analysed as deeply rooted – Granovetter would later say embedded – in their own specific context, and with their own specific merits.[21] To push Polanyi's point even further, one could also say that "formalist" approaches not only lack in specific historical perspective, but also indulge in teleologism, as they infer the need for past societies to overcome the blockages and obstacles that separate them from fully fledged economic development. This process is often conceived as a progressive increase in complexity and identified as a growing concentration and

* The present research has been developed within the framework of the 2017 PRIN "LOC-GLOB. The local connectivity in an age of global intensification: infrastructural networks, production and trading areas in late-medieval Italy (1280-1500)". The author would like to thank the anonymous reviewers for their valuable suggestions, as well as others with whom he discussed the paper: special thanks go to Davide Morra, Maria Ginatempo, Federico Del Tredici and Fabrizio Pagnoni.

[18] As will be discussed later, the scholarly debate on medieval fiscality and taxation follows more or less the same pattern. A recent overview in Menjot, Pijuan, and Caesar, "History of Taxation in Medieval Europe".

[19] A general introduction to NIE and its (nuanced) application to a classic case of pre-industrial development in Epstein, *Freedom and Growth*, 1-37, 145-68.

[20] Polanyi, "The Economy as Instituted Process"; see also Granovetter, *Società ed economia*.

[21] Granovetter, "Economic Action and Social Structure".

"rationalization" of both production and exchange patterns. On the contrary, de-centralization and fragmentation are associated with backwardness and economic backwaters and peripheries.

Even in more "neutral" and less theoretically engaged scholarly work, economic development is often depicted as a growth in production and exchange. This approach has its own methodological flaws as well, since it seldom considers key aspects like actual distribution and consumption patterns or, to put it differently, who actually benefitted from such growth.[22]

In this paper I would try to go against the grain by offering a different perspective on taxation and fiscality. By focusing on the rise of a complex and yet de-centralized economic system in the North-East of Italy from the mid-13th to the 15th century, I would argue that some of the key factors that fostered such complexity were indeed jurisdictional segmentation and lack of fiscal coordination. Furthermore, I would offer a new perspective on the relation between fiscality and infrastructures, which aims to go beyond both traditional ideas of infrastructures as static physical-technical objects, and of taxation as a merely financial and financing tool.

2. **Theory, methodology and sources**

This paper deals with different theoretical frameworks and scholarly traditions, as well as various methodologies. Since some of them, like the substantivist approach to economic history, have been briefly outlined in the previous section, I will now discuss the state of the art of the main topics that will be discussed below: fiscal history; the debate on economic regions and pre-industrial development; new approaches to infrastructures. This review also refers to the most relevant literature on the case-study area, the North-East of Italy, and specifically the eastern side of the Alps.[23] Some key methodologies, like GIS (Geographic Information Systems) and SNA (Social Network Analysis) as well as the main sources used for the present research are also briefly outlined in this section.

Being deeply tied to the development and funding of Italian medieval city-states and, later on, of the late-medieval and early-modern polities, the history of fiscality has always enjoyed some degree of attention in Italian and non-Italian speaking historiography. However, fiscal history as an autonomous field of study only dates back to the 1980s thanks to the work of the pioneers of New Fiscal History (NFH), Richard Bonney and Mark Ormrod.[24] Their focus shifted from the merely budgetary aspects of fiscality to a more nuanced approach that, following the intuitions of Charles Tilly, envisions fiscality and taxation as key and defining moments of the "state-building" process. Such an approach, though fascinating, received its share of criticism, which not only concerned the rather

[22] Some observations along this line of thought in Wickham, *Framing the Early Middle Ages*, 706-708.

[23] For an overview on fiscality and taxation in other areas see the essays collected in Menjot et al., *The Routledge Handbook of Public Taxation in Medieval Europe* and the contribution by Morra collected in the monographic section of this journal.

[24] See for example Bonney, *Economic Systems and State Finance*. A general overview on fiscal history and its academic "genealogy" in Menjot, Pijuan, and Caesar, "History of Taxation in Medieval Europe", 24-32.

loose use of the category of "state", but also its streamlined and linear classificatory and evolutive model for fiscality (tribute state>domain>state>tax state>fiscal state).

Despite the undoubtable merit of shifting the attention to the political "density" of fiscality, the models proposed by NFH seem to struggle at grasping the complexity of the subject. In other words, even though NFH actively engaged in analysing the interaction between fiscality and politics, its main framework still remains mainly budgetary: how did polities evolve their mechanisms and cultural frameworks in order to gain access to the resources they needed for their policies? Consequently, it appears that fiscality existed only as a way to drain, use or (re)distribute resources, a field where the consequences of its own existence, or indeed that of the use of the resources it generated, existed only as long as they concerned the development of polities and their structures.

In this regard, Jean-Claude Waquet advanced what I think is a more fitting theory by stating that "finances are at the intersection of two strategies", one in which polities obtain resources, and the other in which private individuals satisfy their own ends.[25] Such view on fiscality and taxation, that accounts for individual agency and bargaining, deserves further reflection. It can safely be said that fiscality can be characterized as a complex object where polities, private individuals (and communities) interact, each according to its own strategies and agency. This leads to two questions: how did polities, communities and individuals react to the existence of fiscality or, to put it as neutrally as possible, to that of a system of more or less institutionalized resource drainage? How did taxation impact key aspects of everyday life like, in our case, labour, production and exchange of commodities? Such questions have seldomly been addressed by economic historians, though they have been the focus of much research by more "classic" institutional and micro-historians dealing with community-building, urban and rural élites and even seigneurial power.[26] Even scholars that have dealt with indirect taxation, which had the most apparent effects on economy since it weighed mainly on consumption and transfer of objects and commodities, have not fully taken into account its impact on the production of economic landscapes.[27]

During the high and late Middle Ages, one of the most obvious effects of indirect taxation on the economic process as a whole concerned the financing of infrastructures. As most of the budget obtained from so-called direct taxation – including public debt – was directed towards centralized military expenditure, the maintenance of physical infrastructures (i.e. roads, bridges, ports, etc.) was financed

[25] As cited in Menjot, Pijuan, and Caesar, "History of Taxation in Medieval Europe", 30.
[26] Della Misericordia, *Divenire comunità* is an excellent study on rural and alpine communities in the Lombard mountains. The theme of seigneurial resource extraction and its economic underpinnings and consequences has been thoroughly analysed in Carocci, *Signorie di Mezzogiorno*, 377-470.
[27] Direct and indirect taxation have been used as categories by medieval historians ever since Favier, *Finance et fiscalité au bas Moyen Âge*. Here I will use "indirect" taxation to categorise all forms of taxation that weighted on commerce, consumption, and movement (i.e. economic or non-economic actions), in other words all the levies that were not imposed "directly" on individuals or groups. An overview on direct and indirect taxation in Northern and Central Italy can be found in Ginatempo, "Spunti comparativi", where the author deals with the possible effects on consumption levels of indirect taxation, and more recently in Mainoni, "Northern Italy".

mainly through indirect taxation.[28] The genealogy of late-medieval indirect taxes, either stemming from imperial and royal prerogatives regarding the protection of roads (tolls, customs, *telonea*, etc.) or originating as new products of the expansion of commerce and urban consumption of the 12th century, is a complex matter, which can not be here reconstructed.[29] Instead, I prefer to focus on some key aspects of the practices of indirect taxation.

Customs and tolls – the taxes on the passage of individuals and commodities levied at the border of individual jurisdictional areas – were generally centralized. They belonged, almost in a patrimonial sense, to whichever community or individual (princes, lords, etc.) detained the higher authority in the area. On the contrary, other forms of indirect taxation, like *dazi* on consumption or staple rights, were usually de-centralized. They were granted to lesser urban or quasi-urban centres, along with the duty of maintaining and repairing their share of infrastructures. The reason behind these concessions was mainly political, since they were part of the complex game of checks and balances between "central" (for lack of better terms) and local powers. However, they also affected almost every aspect of everyday life. Indirect taxes levied by local authorities could be used to maintain local forms of self-government, the structures of everyday political administration and, of course, infrastructures. They could also foster forms of local public finance, tax farming and semi-autonomous infrastructural investments and policies.[30] In particular, if *dazi*, tolls and indirect taxation were farmed by local capital-holders, they could also have been a key element in the accumulation of capital(s) (economic, political, social, technical). This capital could be further deployed to sustain and expand both production and commerce, thus generating a positive feedback mechanism, whose main and direct beneficiaries were, of course, the capital-holders themselves. Other effects on the economy of such fiscal de-centralization and fragmentation will be analysed later in this paper. For now, let us focus on an issue where political and economic fields tend to overlap: infrastructures.

Albeit still conceived as systems of transport and logistics, infrastructures have been the focus of a recent publication that strives to bring new life to the well-consolidated field of urban network studies.[31] Based on earlier intuitions by Jan de Vries, Paul Hehenberg and Lunn Hollen Lees, the collected volume edited by Giovanni Favero, Michael-W. Serruys and Miki Sugiura relies on the challenging idea that political and economic spaces could have been

[28] An overview on expenditure of direct and indirect taxation in Ginatempo, "Spunti comparativi sulle trasformazioni della fiscalità nell'Italia postcomunale". On infrastructures, De Luca and Tasca, *Finanziare le infrastrutture*, 30-51; Lopez, "The Evolution of Land Transport in the Middle Ages".

[29] On this matter see Carocci and Collavini, "The Cost of States".

[30] For the sake of brevity, I am oversimplifying a rather complex matter. The best existing essays on the interaction between central and local authorities, and the role of taxation and fiscality within the overarching framework of Venetian regional state are Knapton, "Guerra e finanza"; Varanini, *Comuni cittadini e stato regionale*; and, for the early-modern and modern age, Lanaro, *I mercati nella Repubblica veneta*.

[31] Favero, Serruys, and Sugiura, *The Urban Logistic Network*.

built around transport and logistics systems.[32] While it represents a convincing step forward from the old paradigm of the *Zentralen Orte* (central places) proposed by Walter Christaller, this collection of papers remains still vague when it comes to identifying economic regions. On the other hand, the debate on economic regions, which raged during the 1980s, has now quiesced without reaching any satisfying outcome.[33] Yet, the idea that infrastructures and infrastructure networks could be a useful tool to analyse and break down economic organization shows much promise. In order for infrastructures to be fully deployed as a hermeneutical tool for the study of pre-modern economy, though, it is also necessary to question their very nature.

Historians usually conceive infrastructures as mainly physical objects ranging mostly from land- and waterways to more complex assets, like bridges and ports. Some other structures connected to commerce (warehouses, *fondaci*), political control (castles, fortifications), and hospitality (hospitals, inns, taverns) are sometimes taken into account. However, they are usually analysed as external elements interacting with infrastructure within a multi-causal explanatory model, rather than part of the infrastructure system itself.[34] What I am arguing, on the other hand, is that a different approach to infrastructures could be useful in outlining interactions not only within the range of technical or physical artifacts, but also between the latter and individuals, communities, and other intangible factors.

Anthropology has also developed an interesting new approach to infrastructures. In summary, it has been argued that infrastructures are no mere set of physical or technical objects, but rather "built networks that facilitate the flow of goods, people, or ideas, and allow for their exchange over space".[35] Furthermore, one must also take into account the fact that infrastructures present an inherently ambiguous nature, as they are "matter that enable the movement of other matter", and also both "things and […] the relation between things".[36] In other words, anthropologists suggest that infrastructures could be better interpreted if integrated within a network where their physicality and their ontology interact with other actors like individuals, communities, institutions, and cultures. To use the effective definition

[32] Favero, Serruys, and Sugiura, "Introduction". The idea that regions could be defined by their own transport and connection systems has been also advanced by Paola Lanaro (Lanaro, *I mercati nella Repubblica veneta*, 39).

[33] A good summary on the dabate can be found in Franceschi and Molà, "Regional States and Economic Development" as well as in Scott, "The Economic Policies of the Regional City-States of Renaissance Italy. Observations on a Neglected Theme". Sakellariou, "Regional Trade" outlines an interesting approach to economic spatiality by conceptualizing regions according to scale-type of commerce. A new proposal for the definition of regions in pre-industrial and pre-national state context can be found in Vidal, "Specializzazione e integrazione".

[34] The multi-causal, multi-object approach has its origin in the ground-breaking work on the Italian road systems by Giuseppe Sergi (Sergi, "Evoluzione dei modelli"). Such approach has been recently used combining archaeological and historical methodologies along with GIS in Rao and Zoni, "Viabilità e insediamenti". Much research have been published on the road systems in the Alpine area. As for the specific part of the Alps covered by this paper see, for example, the overviews on Veneto (Varanini, "Appunti sul sistema stradale"; Orlando, *Strade, traffici, viabilità in area veneta*) and Friuli (Degrassi, "Dai monti al mare").

[35] Larkin, "The Politics and Poetics of Infrastructure", 328.

[36] Larkin, 329.

by Marian Burchardt and Stefan Höhne, infrastructures could be labelled "socio-technical assemblages".[37]

Such approach could be applied to historical infrastructures as well, and specifically to historical economic infrastructures. Consequently, along with physical elements of economic infrastructure (productive structures, warehouses, transport systems), other issues should be taken into account, and especially the social aspects, such as labour relations and organization, merchant networks, politics, flows of information, and fiscality.[38] In this paper I will apply exactly this socio-technical network approach to infrastructures to analyse the development of a complex and integrated economic system in a little known, yet undoubtedly key area of eastern Alps, which is located between Friuli and Carinthia (see below figure 1).[39] My aim is to outline the mutual interaction between politics (the policies of the polities and the local communities), fiscality (tolls, fairs, exemptions, staple rights), physical infrastructures (road and warehouse systems, productive structures), and economic organization as a whole (labour, transport and exchange patterns). I will then argue that political and jurisdictional fragmentation of the area of the eastern Alps, along with its fiscal de-centralization, could have contributed to the development of economic patterns, rather than hampering them.[40]

The focus of this paper is on the so-called *niederlech*, a kind of staple right that was contended between the two Friulian communities of Venzone and Gemona. It seemingly compelled foreign merchants to unload and unpack their merchandises and load them again on local transports, while also paying a tax.[41]

The main source I use to analyse the effects of *niederlech* on exchange and transport patterns is a toll register from 1426-1427, which, as far as I am aware of, is yet unknown.[42] In this register, the person who was charged with the exaction (possibly of the *nierderlech* itself) recorded both the transits of commodities belonging to foreign merchants through the town of Gemona and the transporters to whom

[37] Burchardt and Höhne, "The Infrastructures of Diversity", 4.

[38] This approach will be further discussed later this year in the closing volume of the 2017 PRIN "Loc-GLob. The local connectivity in an age of global intensification".

[39] This area connected Carinthia and other German-speaking regions to the financial and commercial hub of Venice: Braunstein, "Le commerce du fer"; Braunstein, *Les Allemands à Venise*, 31-74. Recent research has also highlighted a high degree of connections between this area and the flourishing urban networks of the Po Valley, which entirely bypassed the city of Venice: Scarton, "La falce senza il grano"; Vidal, "The Hinterland of Long-Distance Trade".

[40] A fist outline of this idea has been sketched in Vidal, "The Hinterland of Long-Distance Trade".

[41] As discussed later, research on the *niederlech* in Venzone and Gemona sometimes takes its development for granted. On similar staple rights, see Gönnenwein, *Das Stapel- und Niederlagsrecht*. I would like to thank Carsten Jahnke for letting me know of this latter work.

[42] The register is now preserved in the Archivio di Stato di Udine (from now on ASUd), within the archival collection of the aristocratic family Colloredo-Mels (ASUd, *Colloredo Mels*, part I, b. 5, "MIIIIXXVI todeschi"). Why the manuscript was transmitted within the Colloredo-Mels collection is not clear. The volume also includes a homologous register that probably referred to the previous fiscal year, but its poor conditions render consultation impossible. I would like to thank the head of the study room of the archive, Dr. Gabriella Cruciatti, for allowing me to consult the register for 1426-1427 under her supervision.

the commodities had been untrusted.[43] Though limited to a single fiscal year (October 1426-September 1427) the register sketches a picture that appears consistent with earlier sources (private notarial deeds, city council deliberations, lawsuits and legal proceedings). It could thus be used to infer more general – even quantitative – considerations.

Since the register is not preserved in the archive of the commune of Gemona, and thus seemingly represents a *unicum*, it is difficult to say much about its characteristics and its role within the documentary system of the town. The lack of toll registers in most of the lesser urban centres is a consequence of widespread tax farming.[44] Since most indirect taxes were not collected by the civic administration of towns, but rather auctioned to private individuals (or a pool of private individuals), all the documentation produced during tax collection remained in private hands and was not aggregated – except for possible legal proceedings – to the town archive.

The register records a total of 207 accounts belonging to 137 individual merchants, corresponding to a total of 1027 individual lots of merchandise.[45] Even if it is a rich and meaningful source, it also offered its fair share of difficulties. Although trained in the particular kind of merchant-notarial writing used by everyday writers in Friuli, the scribe was neither a notary nor fluent in the German dialects used by the merchants of Carinthia, Austria and Lower Germany. As a consequence, places within the *Patria del Friuli* were spelled fairly consistently and are easy to identify, while the hamlets, towns, and cities lying beyond the border of the Republic of Venice – including the now Italian villages of the Val Canale, which were then under the jurisdiction of the bishop of Bamberg – were not translated, but transliterated into Friulian *volgare*. Apart from the main cities and hubs like Villach ("Vilac"), St. Veit an der Glan ("Sent Vit") or Salzburg ("Solespurc"), it is thus necessary to "reconstruct" a modern or reliable spelling based on the "transliteration" of the sounds the scribe heard from the passing merchants and transporters.

It could be useful to clarify the method I have used to identify the places from the toll register with an example. The register mentions a sizable group of merchants from a place called "Vigen". It is composed of 22 merchants who transported copper and mercury to the South, and took back mainly leather, cloth, and textiles. Since "Vigen" is nowhere to be found, I tried to trace back the original sound and spelling the scribe transliterated. Since the voiced labiodental fricative "v" is spelled "w" in German languages we would then have "Wigen". Yet again, "Wigen" does not exist. I then dared to venture that the "g" the scribe used could indicate a tentative transliteration of

[43] The term "foreign" indicates all individuals not belonging to the former political jurisdiction of the Patriarchate of Aquileia, by 1420 under the control of the Republic of Venice. More details on the geographical origin of the merchants mentioned in the register will be given later.

[44] Similar problems can be seen in the neighbouring territory of Treviso; Vidal, "Specializzazione e integrazione". Morra, "Vivere per gabelle. Spunti comparativi sulle fiscalità municipali nel regno di Napoli tardomedievale" sketches a convincing picture of the role of tax farming based on data from the Kindgdom on Naples during the late 1400s. The system of tax farming in Gemona has been analysed in Sbarbaro, *I dazi di Gemona del Friuli*.

[45] The database built on the data of this register has been uploaded on Zenodo and can be consulted online (https://zenodo.org/record/8060450). Further information on the dataset and an example of the registrations can be found there.

the sound /iː/ as in "Wien". Furthermore, identifying "Vigen" as "Wien" was consistent with qualitative data from other sources, that testify to the relevant role merchants from Wien played in the German-Italian late medieval exchange.[46]

In other cases, the georeferentiation of places was further hampered by historical changes, as some toponyms either transformed or disappeared altogether. I thus relied on previous scholarly work and historical cartography to identify the toponyms mentioned in the register.[47] Even so, 39 out of 106 toponyms (.3679) – fortunately accounting for just 170 out of 1027 lots of merchandises (.1655) – still remain unidentified.

The data from the register have been organized and georeferenced in a GIS dataset. The GIS approach has been used to evaluate the geographical distribution of both merchants and transporters and its reciprocal relation to the jurisdictional (and fiscal) patchwork of the area (see below figure 1). The branching connections between merchants and transporters, which perfectly fit under the label of labour relations, have been studied with the methods of Social Network Analysis (SNA). Using SNA is not a novelty by any means, but its application to historical economic networks has been limited to merchant networks, which are characterized by a high degree of "horizontality" and reciprocity.[48] As I will demonstrate in the last section of this paper, in a case-study characterized by the prevalence of asymmetrical (technically "directed") relations, SNA can provide some interesting insights on labour organization and the effects of jurisdictional fragmentation.[49]

3. Shaping space, shaping economy: jurisdictional fragmentation in the Julian Alps

During the high and late middle ages the area of the Julian Alps, now divided between modern day Italy, Austria and Slovenia, was a patchwork of overlapping jurisdictions.[50] Even though the Patriarch of Aquileia was formerly the head of a vast diocese that also formally

[46] On the role of the merchants from Wien and Austria in the German-Italian exchange system see Braunstein, *Les Allemands à Venise*, 209-219.

[47] The brief but crucial toponomastic index that Philippe Braunstein created from a similar Friulian pass register concerning the movement of foodstuff during the war of Chioggia (1381) was extremely useful: Braunstein, "Guerre, vivres et transports", 104-106. As for historical cartography I relied on "Novissima Carinthiae Tabule" by Jhann Bapist Zauchenberg (1718), which is available online on *Moll's map collection* (URL: https://mapy.mzk.cz/en/mzk03/001/040/111/2619266724/ last visit 04/03/2023) and the early-19th-century Habsburg military surveys, which is also available online on *Arcanum Maps* (URL: https://maps.arcanum.com/en/map/europe-19century-secondsurvey/?layers=158%2C164&bbox=-333711.0626633568%2C5031772.478985248%2C4320998.211790737%2C6810003.505011588 last visit 04/03/2023).

[48] For a general introduction to SNA and its application to economic history see Caracausi and Jeggle, *Commercial Networks*. Noteworthy examples of full application of SNA to economic history can be found in: Padgett and McLean, "Organizational Invention and Elite Transformation"; Ewert and Selzer, *Institutions of Hanseatic Trade*.

[49] An introduction to SNA and its jargon in Marin and Wellman, "Social Network Analysis"; Hanneman and Riddle, "Concepts and Measures".

[50] Information and data on the jurisdictional borders has been taken from the map by Klein, "Salzburg. Ein unvollendeter Paßstaat", 281 and corrected with the accurate work made by Cusin, *Il confine orientale*, and especially his mapping.

included Carinthia, Styria and Carniola, in the 13th century his political authority was limited to the so-called *Patria del Friuli*.[51] This region, which was slightly bigger than modern day Friuli, as it also included Cadore and the Bishopric of Concordia. After 1420, the political authority of the Patriarch of Aquileia crumbled and his domains were included in the Republic of Venice.

Beyond the borders of the *Patria del Friuli*, the German-speaking regions of Carinthia and Styria were divided among the lordships of the Counts of Cilli, the Counts of Gorizia, the Habsburg, and the bishoprics of Salzburg and Bamberg. The latter held jurisdictional (and fiscal) power over a crucial area, which spanned from the key commercial hub of Villach to the Italian-speaking Canal del Ferro, up to the village of Pontebba/Pontafel (figure 2).

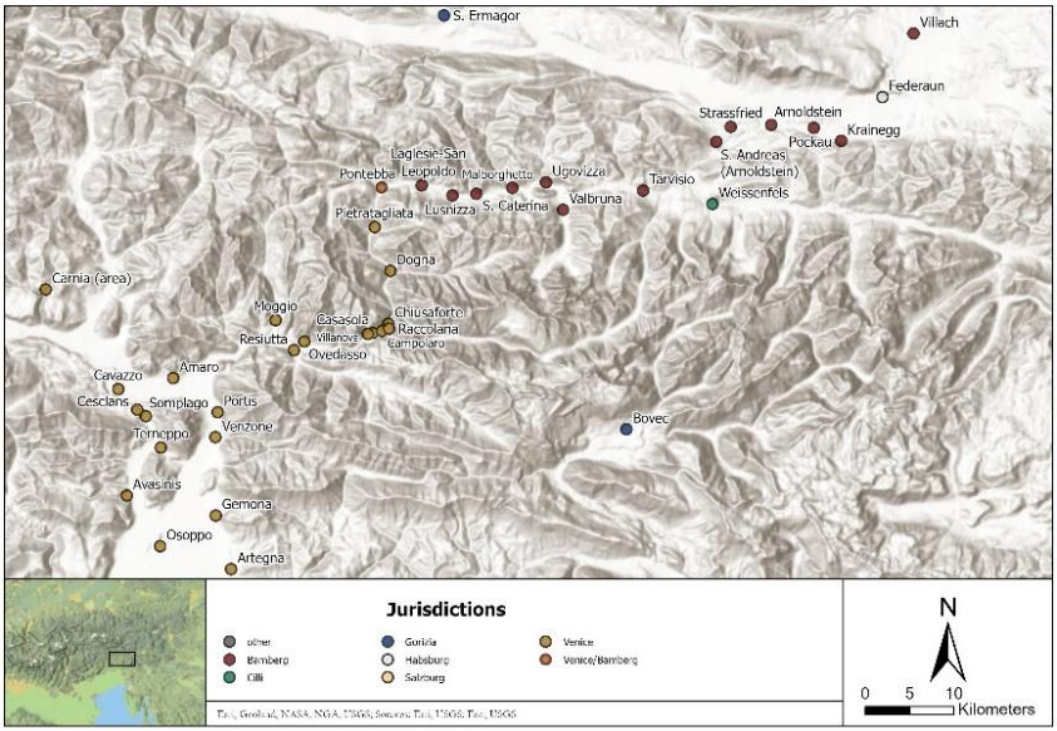

Fig. 1. The Julian Alps and the main toponyms mentioned in the paper (post 1420).

[51] De Vitt, "Vita della Chiesa", 159.

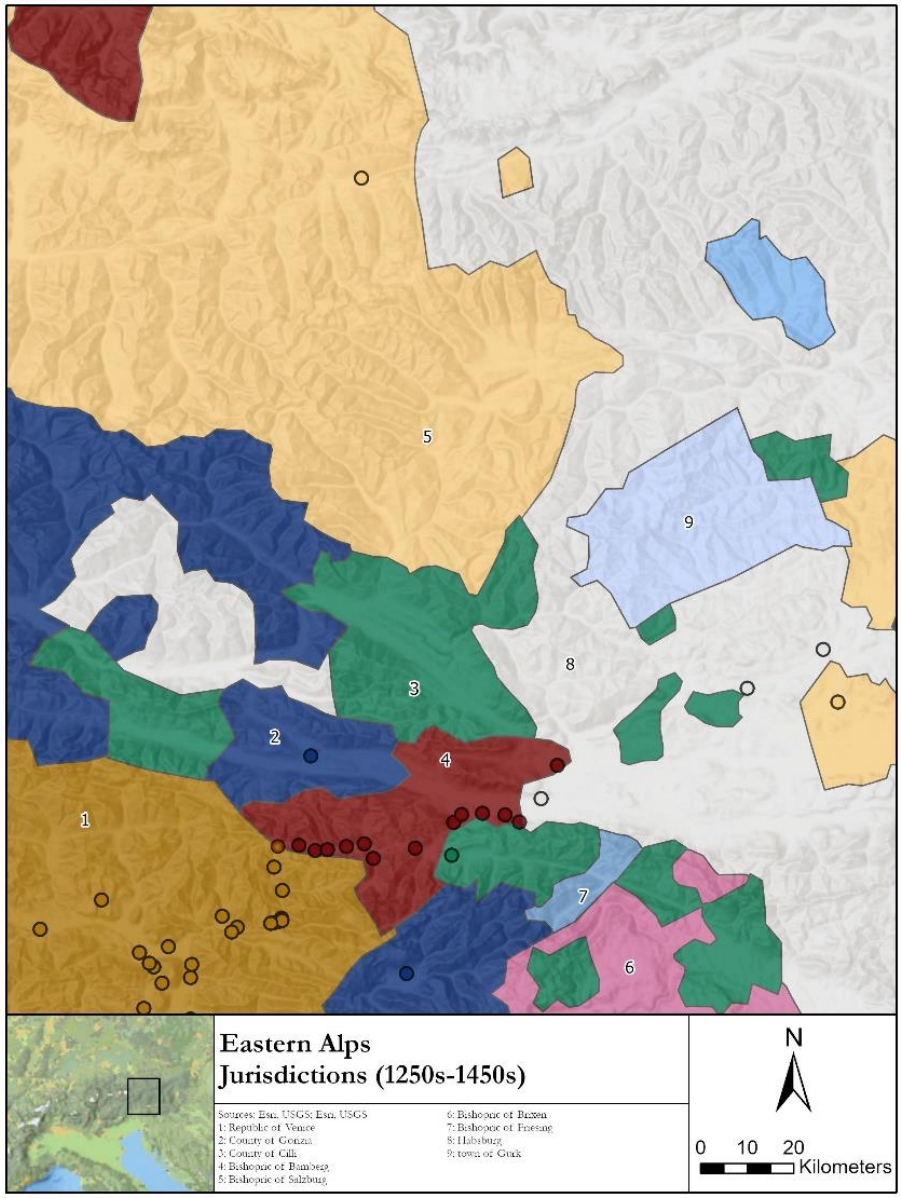

Fig. 2. Jurisdictional areas in the Eastern Alps (1250s-1450s).

Fragmentation was exacerbated by the presence of jurisdictional enclaves within the borders of the *Patria del Friuli*, such as the town of Venzone, originally a fief the Patriarchate of Aquileia bestowed to the Mels family. Later, it was controlled by the dukes of Carinthia (1288-1335), the Patriarchs themselves (1336-1351), and then also the Habsburg dukes of Austria (1351-1365).[52] It was only after 1365 that Venzone became a part of the *Patria del Friuli*. Yet, despite such exasperating fragmentation, or rather because of fragmentation, by the 1350s the whole area was characterized by lively exchange patterns.

[52] Cusin, *Il confine orientale*, 15, 34-38, 42, 58-60.

Even though the role of Venice as a financial and commercial hub for both German and Friulian commodities was never disputed, the existence of multiple fiscal barriers did encourage the diversion of some merchandise through emerging secondary markets, like Friuli. This applies in particular to the so-called "bulk commodities" (wine, oil, metal and metalworking, leather, etc.), which suffered multiple tolls and fiscal levies because of their low price/weight (or volume) ratio.[53] Data from notarial registers and account books from this area suggest that fragmentation fostered intra- and interregional specialization as well as integration, by stimulating the development of complementary productive systems. It goes without saying that the latter did not emerge overnight but were the result of a long standing political and fiscal interaction, which started in the 1250s and enjoyed a sizeable acceleration during the Habsburg domain over Venzone (1351-1365).[54]

The main features of this system can be summarized as such:

1. Commerce-oriented specialization on both side of the Alps: Carinthia, Styria, and more generally the German-speaking areas exported raw or semifinished metal (like pig iron, silver and copper) and live cattle, while importing from Friuli wine (both fine and low-quality), oil and rough woolen textiles (the *panni grisi*).
2. Regional and sub-regional division of labour, especially in the productive process of iron and ironwork: both the extraction and first transformation of iron (from raw to crude iron) were concentrated in the German-speaking areas, while the process of decarburization (from crude iron to steel and wrought iron) and the production of iron objects was divided among the Val Canale and the Friulian piedmont.
3. Reliable infrastructural, transport and logistic system: the hardships of transalpine exchange were mitigated by a refined system where hospitality and transport services were well-distributed and available all along the road.

Despite of its paramount relevance, the latter aspect has not been analysed by recent research, which focused mostly on the first two points.[55] In the following paragraphs I will sketch the history of the transport and logistics network that connected the two sides of the Julian Alps, highlighting the role of both fiscality and politics in its development. As already stated, an infrastructural approach will be used to outline the reciprocal interaction between the – supposedly – distinct fields of politics, fiscality, and economics.

The Italian portion of the Eastern Alps (from the Brenner Pass to the Carso) is characterized by overall low and accessible mountain passes, being a key passage area ever since the Antiquity. Even though commercial transits declined after the fall of the Roman empire and during the early Middle Ages, this area preserved its role as the most favourable access to Italy for travellers coming from Central Europe.[56]

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[53] The high incidence of transaction costs (including fiscality) on bulk commodities is a staple of economic history. Although focused on freight charges and transport, the most relevant studies on the cost/weight ratio of bulk commodities remain Dotson, "A Problem" and Melis, "Werner Sombart". An interesting discussion on the role of bulk commodities within complex economic circuits can be found in Sakellariou, "Regional Trade", 148-152.

[54] The overall development of economic integration in the area has been summarized with a regional focus in Vidal, "The Hinterland of Long-Distance Trade", 90-97 and figures 2-4.

[55] Scarton, "La falce senza il grano"; Vidal, "The Hinterland of Long-Distance Trade".

[56] A brief outline in Degrassi, "Dai monti al mare".

The development of stable connections and trade routes between Venice – and Italy as a whole – and Central Europe during the 13th century further consolidated the role of the Eastern Alps as a connecting area.[57] The Patriarchs of Aquileia, who controlled a significant portion of the land route in this area, did not lag behind these new developments. By 1254, less than thirty years after the foundation of the *Fondaco dei Tedeschi* in Venice (1228), they had already established a new toll to be exacted in Chiusaforte on some key transalpine commodities like salt, iron, and pitch, a toll that Venice vainly tried to oppose.[58]

Needless to say, stable commercial land routes both needed and fostered the development of the economic sectors of logistics, transport, and (commercial) hospitality, which in their turn allowed the development and deployment of specific and transport-related fiscality. Yet even such seemingly obvious and "natural" developments are hardly immune from the influence of the infrastructures in their anthropological meaning, which included the complex set of factors behind them.

Before analysing the effects of the multifarious forms of jurisdictional and fiscal fragmentation on the organization of economic activity in this area, I would briefly outline the history of a key element of fiscality in the area: Gemona's *niederlech.* As I will demonstrate later, Gemona's claims on the *niederlech* were wildly unfounded and based on progressive mis- and re-interpretations of the patriarchal provisions. These claims gained force of law due to both consuetudinary practice and the ever-changing power balance of the Patriarchate of Aquileia, which was an ecclesiastical principality, and consequently a non-dynastic polity.

Scholarly work on Gemona and on its staple right is incredibly scarce and somewhat uncoordinated, which may come as a surprise given the relative abundance of documentation from the 13th century onwards.[59] When researchers dealt with the *niederlech*, the historical narrative tended to over-emphasize the degree of consciousness of patriarchal (and Gemonese) fiscal policies, or took the staple right as simply given, as if it could have emerged rather mysteriously from the shadows of documentary dispersion in its final form.[60] On the contrary, the history of the *niederlech* must be analysed and understood within a wider context that includes at least three elements: the physical and technical structures of transalpine transport and trade; the power dynamics of the Patriarchate of Aquileia during the key time span (late 11th–14th centuries), when towns and urban centres grew both demographically and politically; the international political context.

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[57] Zaoral, "Mining, Coinage, and Metal Export in the Thirteenth Century", 213-215.

[58] A summary of the commercial treaties between Venice and the Patriarchs of Aquileia during the 13th century in Vidal, "The Hinterland of Long-Distance Trade", 86-90.

[59] Cammarosano, *Gemona nella patria del Friuli*; Sbarbaro, *I dazi di Gemona del Friuli* both deal with a varying degree of accuracy with many facets of the history of Gemona, but a comprehensive and reliable study has not been produced yet. A recent book by Enrico Miniati is accurate in describing certain aspects of the history of Gemona (i.e. the road system, and the control over key assets like woods and pastures), but lacks historiographical breadth and thus remains anchored to local and outdated historiography. Miniati, *Gemona nel basso Medioevo*.

[60] An example of the first approach in Degrassi, "L'economia", 374; the latter approach is endorsed in Miniati, *Gemona nel basso Medioevo*, 53-9.

Local historians seemingly agree that the first mention of the *niederlech* dates back to the year 1280. It consisted in the formalization and institutionalization of a stop in Gemona, which was already common for people travelling from the German-speaking lands to Italy.[61] In his recent study of Gemona, Enrico Miniati acknowledges that no charter of the first concession of the *niederlech* exists. However, he does not push the analysis further and goes on considering the *niederlech* as a rather unitary and unchanging object. Since its inception, it would have consisted of an obligation for foreign merchants going to Venice to stop, spend the night in Gemona, and load their merchandise on "Friulian" carts.[62]

However, even if the absence of a charter or a document reporting the original institution of the *niederlech* could be mere accident or consequence of documentary dispersion, it's hard to believe that this happened in Gemona, whose archive preserved and transmitted a large number of documents. None of its numerous and detailed legal proceedings nor its documentary collections regarding the *niederlech*, the earliest dating back to the 1360s, mention any "original" charter. In my opinion, not only the charter dated 1280 could not be identified as the earliest patriarchal concession of a staple right to the town of Gemona, but the whole *niederlech* is a "fabricated tradition". The Gemonese were able to validate and enforce it mostly thanks to the non-dynastic succession of the Patriarchs of Aquileia and the power vacuums it created.

Let us start from the patriarchal charter dated 1280, which should be considered the "founding act" of Gemona's *niederlech* according to local historians. First of all, it must be underlined that there is no original or authentic notarial copy of this charter, nor such authenticity could be proved for much of the other charters regarding the *niederlech*. All these documents have been transmitted in the form of summaries within dossiers, which were meant to be used in court proceedings. The earliest one is a roll produced in 1362, the so-called *niederlech* parchment, which contains 13 patriarchal charters summarised by 5 notaries to prove Gemona's staple right.[63]

Secondly, the charter from 1280 does not mention the *niederlech per se*, nor declares that the patriarchal statute was meant to be a concession to Gemona, as opposed to a more general provision. As for the content, it seems to be fairly straightforward. Patriarch Raimondo della Torre ordered that no merchant passing through the Patriarchate of Aquileia could avoid unloading its merchandises in Gemona, no matter the port from which he came, being it either the patriarchal ports of Portogruaro and Aquileia or the port of Latisana, which was under the jurisdiction of the Count of Gorizia. Even though the document, technically a statute, did not mention neither the concession of staple rights to Gemona, nor any kind of obligation to spend the night in the city and change carts, the Gemonese would later

[61] Miniati, *Gemona nel basso Medioevo*, 53. Degrassi, "L'economia", 374 says more or less the same even though it does not mention the date of the (supposedly) first mention.
[62] Miniati, *Gemona nel basso Medioevo*, 53-9.
[63] The roll is preserved at the Biblioteca Civica di Gemona (from now BCG), *Pergamene*, b. 1654, parchment 1. Apographs of the summaries from the parchment are preserved in legal proceeding that opposed Gemona and Venzone as well as Gemona and Wien during the 1390s. The dossier has been included in a miscellaneous volume of the Biblioteca Civica di Udine (from now BCUd), *Fondo Principale* (from now *FP*), ms. 892, vol. III, ff. 47r-58r.

consider this as a proof that the *niederlech* had been granted "gratiosum et de iure" by Patriarch Raimondo.[64]

Two receipts from 1296 confirm that the *niederlech* existed in Gemona, but fail to mention whether the town administered the compulsory stop.[65] Furthermore, it seems that the two receipts, whose content is fairly identical,[66] were a sort of clearance certificate to be presented at the toll stations of the Patriarchate. In the first one, for example, two individuals from Venzone, Michele and Domenico, declared and promised to the *provisoribus strate* of Gemona that the five *saume* of salt they carried would not be unloaded or sold in Venzone, as they intended to transport and sell them beyond the toll station of Chiusaforte. It seems thus that the focus of the patriarchal statute of 1280 was neither the creation of a cart-transport exchange mechanism, nor a concession to the town of Gemona, but rather the reinforcement of fiscal control in the area, which had become necessary after the sudden rise of Venzone, an enclave of the Counts of Gorizia, as an exchange and logistic hub.

In order to understand the strategy of the Patriarchate of Aquileia, though, we need to take a step back to 1184, when Patriarch Gotebold granted a weekly market to Gemona. At the same time, he also prohibited any competing market in the wide area spanning from the north-eastern border of the Patriarchate (Pontebba) to the Carnic Alps (Monte Croce).[67] Even if this market charter could have represented a mere confirmation of a *de facto* situation, it was probably issued also to create a policy meant to reinforce the central power of the Patriarchate and curb the exuberance of the aristocracy by favouring a strictly dependent town and concentrating economic exchange.[68]

Travel and exchange along the transalpine axis was still too weak to be either fiscally exploited by the Patriarchs of Aquileia or be a part of the strategy that underpinned the concession of weekly markets to Gemona.[69] Although the market concession was undoubtedly difficult to fully enforce in a vast and mountainous area, it would have influenced the logistics of long-distance trade in the first half of the 13th century, when transalpine trade started gaining momentum. Gemona would then become the first (official) market where merchants coming from the northern side of the Alps could find professional hospitality, services, and institutionally guarded warehouses, but most importantly a market where they could quickly realise some profits. Such developments were clearly welcomed by the Patriarchs of Aquileia as they were functional to the fiscal exploitation of a budding trade flow. However, they were also hampered and somewhat frustrated by the emergence of a similar competing hub, Venzone.

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[64] The quotation is taken from a legal proceeding from the 1390s, where Gemona sought to defend its privilege against the request of the merchants from Vienna; BCUd, *FP*, ms. 892, vol. III, ff. 56rv.

[65] BCUd, *FP*, ms. 892, vol. III, ff. 51rv.

[66] The only difference is the direction of the bearer of the receipt, headed east towards the toll of Chiusaforte in one case, headed west towards Tolmezzo in the other.

[67] Degrassi, "L'economia", 374.

[68] Concentrating economic exchange was a tool deployed by urban communes to weaken aristocratic clienteles, as it happened in the neighbouring contado of Treviso: Vidal, "La podesteria di Asolo", 33-5.

[69] Commercial connections between Venice, Friuli and Austria before the 1200s have been briefly outlined in Härtel, "Il commercio veneziano".

This small castle and borough, while formally enfeoffed by the Patriarchs of Aquileia to the Mels family, was in fact largely independent. By the 1260s the Mels had started exploiting the more favourable and strategic position of Venzone as opposed to Gemona.[70] They transformed their castle and borough into an exchange and logistic hub for transalpine trade. As a crucial step in this strategy, the Mels agreed to a toll and fiscal pact with the Counts of Gorizia, thus creating a streamlined and favourable transport system that connected the German-speaking lands to Venice via Venzone and then Latisana, a river port controlled by the Counts of Gorizia.[71]

Venzone especially flourished as a market where Friulian, and more generally "southern" merchandises, such as wine, oil, salt and wollen cloth, were exchanged for "northern" commodities, like iron, pelts and cattle. However, such developments were at odds with the patriarchal strategy at least on two grounds. On the one hand, the charter granted to Gemona explicitly prohibited any other market north of the town, while, on the other, the patriarchs could hardly allow the development of a strategic castle within their jurisdiction. Moreover, Venzone was even a *de facto* fiscally exempt area, which was influenced and later controlled by the main competitors for regional power, the Counts of Gorizia.[72]

The 1280s are fraught with attempts by the Patriarchate of Aquileia to curb the development of a market in Venzone. On two occasions, both in 1281, Patriarch Raimondo needed to recall his (formal) subject and fief-holder, Clizoi of Mels, that no market and bulk exchange were allowed in Venzone, while admitting retail and consumption sales, such as those happening in inns and taverns.[73] In 1283, Raimondo also issued a letter to the toll officers of Tolmezzo (and likely to those of Chiusaforte) ordering the impounding of any merchandise sold in Venzone.[74]

Enforcing fiscal control was indeed difficult, as the depositions given by the innkeeper Nicola and the notary Romano in 1285 clearly demonstrate.[75] Even though merchants and transporters could only pass the patriarchal toll stations by showing the seal of the captain of Gemona (likely a receipt, such as those dated 1296 already mentioned), many merchants would still buy bulk merchandises in Venzone and ship them, thus completely evading patriarchal control.

Given this wider political, economic and fiscal framework, the statute from 1280, which the Gemonese (and an oversimplified historiography) considered to be the grant of the *niderlech*, was nothing more than one of the tools deployed by the Patriarchate of Aquileia to enforce fiscal control over their jurisdictional area.

A turning point in the history of the *niederlech* must be identified in the 1330s. It was a time of heightened tension between the Patriarchate of Aquileia and the Counts of Gorizia (now also Dukes of Carinthia and Counts of Tyrol) within the wider, international struggle over imperial power that pitted Frederick the Fair against Luis IV of

[70] Venzone was located on the road coming from the Alpine valleys, while entering Gemona required a (rather steep) diversion.
[71] Figliuolo, "Le dinamiche insediative".
[72] An overview in Vidal, "The Hinterland of Long-Distance Trade", 90-5.
[73] BCUd, *FP*, ms. 892, vol. III, ff. 47r-48r.
[74] BCUd, *FP*, ms. 892, vol. III, f. 48v.
[75] BCUd, *FP*, ms. 892, vol. III, ff. 49v-51r.

Bavaria.[76] During this period, localized and sporadic warfare along the borders of the Patriarchate created a sense of general insecurity of trade routes. Thus, when political turmoil receded, the competing authorities issued a variety of safe-conducts that were meant to guarantee and protect merchants travelling to conduct their business.

The production of safe-conducts itself became an occasion for authorities to promote certain routes to the detriment of others. In 1328, Count Henry II of Gorizia-Tyrol solemnly guaranteed the merchants travelling on the road that connected his two subject towns of Venzone and Latisana. Three years later, in 1331, Patriarch Pagano della Torre also guaranteed the merchants up to his town of Gemona.[77] Significantly, even though this guarantee never mentioned Gemona's *niederlech*, nor the compulsory fiscal stop in town, the Gemones would later consider this document as the "first concession" of the *niederlech* the patriarchs made to the town.[78]

The death of Henry II of Carinhia-Tyrol (1335) and the forceful action of the new patriarch, Bertrand of Saint-Geniès (elected in 1334), should have given Gemona the perfect context to win its rivalry with Venzone, thus (re)gaining the role of sole intermediary between Friuli and the German-speaking lands. It was at this time, though, that the civic administration of Venzone – in the hands of the Counts of Gorizia since 1335 – decided to go back to patriarchal jurisdiction. Aiming to reinforce his authoriy, Patriarch Bertrand accepted the submission proposal of the town, by also approving its requests, which included:

1) The concentration in Venzone of toll exaction, which were previously delegated to the toll stations of Tolmezzo and Chiusaforte;
2) The removal of the toll levied in Gemona on merchandises bought and sold in Venzone;
3) The concession (or rather confirmation) of a weekly market in Venzone;
4) The exemption from compulsory stop in Gemona (once again no mention of any Gemona-administered *niederelch*) for the citizens of Venzone.[79]

Consequently, the submission of Venzone to the authority of the Patriarchs of Aquileia in 1336 dismantled the whole system that had fostered and sustained the emergence of Gemona as a logistic hub of transalpine trade. Not only these submission pacts broke the monopoly of Gemona over bulk trade in the area, which had been granted in 1184 through the market charter, but also a system of fiscal immunity was created. This stimulated the development of Venzone

[76] An insight into this difficult political phase, with specific focus on this area: Cusin, *Il confine orientale*, 28-43.
[77] The safe-conduct issued by Henry II is preserved in the *Libri Commemoriali* of the commune of Venice and published in Zahn, *Austro-Friulana*, 36-37. For the patriarchal document see Zahn, 38 and the copy made by the Gemonese in BCUd, *FP*, ms. 892, vol. III, ff. 52rv.
[78] BCUd, *FP*, ms. 892, vol. III, f. 52r: "super niderecho prima impetracio".
[79] The list of requests made by the town of Venzone, which were fully approved by the patriarch and the Parliament, can be found in the notarial register of Nicolò son of Candido from Venzone; ASUd, *Archivio notarile antico* (from now *ANA*), b. 10717, Nicolò di Candido Warchacil (1336), ff. 42rv.

and its merchants as the favourite intermediaries of transalpine trade.[80]

After the assassination of Patriarch Bertrand in 1350, the regency over the vacant patriarchal see by the dukes of Austria and the treaty of Budweis (1351), the town of Venzone became once again a jurisdictional enclave, this time under the rule of the Dukes of Austria.[81] Even if it would later be reintegrated into the patriarchal domains in 1365, during this period the role of Venzone as a logistic and intermediation hub was consolidated for good. The creation of a fiscally exempt area that bridged the two sides of the Alps also fostered the interregional division of labour that characterized the area throughout the 1400s.[82]

As Venzone emerged as a fiscally exempt area in the 1350s-1360s, Gemona sought to reclaim its role as a logistic hub. It was during this crucial span of time that the now fully-fledged urban élites of Gemona tried to transform the *niederlech* from a compulsory stop connected to the enforcement of fiscal control by the Patriarchs of Aquileia to a privilege the town enjoyed and administered on its own.

The death of Patriarch Bertrand provided the chance to "usurp" the *niederlech*. Since the regency of the Duke of Austria (1350), Gemona started requesting each new patriarch the confirmation of the *niederlech*. In 1362, the first summary of the *niederlech* was then commissioned to the five notaries that produced the so-called "*niederlech* parchment".[83]

The plan devised by the Gemonese was not without its merits. It exploited a phase of rapidly shifting power dynamics in the Patriarchate of Aquileia as well as the continuous turnover of political personnel that at this time often came from outside of it. However, their strategy was frustrated by the decade-long stratification of fiscality of the area and the content of the treaty of Budweis (1351). It guaranteed further fiscal immunity to the denizens of the domains of the Dukes of Austria, among which, at the time, was the town of Venzone.[84] The Gemonese then decided to take matters into their own hands, taking advantage of the Patriarchs' struggles against the Dukes of Austria.

Starting from 1363-1365, the Gemonese violently impeded the road by compelling carters and merchants to stop in their city. They also introduced a new obligation, the so-called *mutatio curruum*, a rather extensive interpretation of the patriarchal statute, which instituted the compulsory stop in Gemona in 1280.[85] The original document stated

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[80] A diachronic analysis of the merchant networks of Venzone in Vidal, "The Hinterland of Long-Distance Trade".

[81] A summary in Vidal, "The Hinterland of Long-Distance Trade".

[82] See the overview above at footnotes 37-39.

[83] The confirmation requests are most completely registered in BCUd, *FP*, ms. 892, vol. III, ff. 53*a*r-55v. Allegedly, Gemona also boasted a confirmation by Patriarch Bertrand dated 133, but choose (rather suspiciously) not to present it (BCUd, *FP*, ms. 892, vol. III, f. 55v: "non ostenderunt"). Since the *niederelech* parchment from 1362 does not mention such confirmation, it is possible that either no document existed, or it failed to mention the *niederelch* altogether.

[84] Zahn, *Austro-Friulana*, 45-6, 76-8, 91-2.

[85] The violent action of Gemona and the institutionalization of the *mutatio curuum* can be reconstructed thanks to many depositions given during a legal action of Venzone against Gemona in 1397; BCG, *Comune di Gemona archivio storico* (from now *CGAS*), b. 658, "Niderlech mutation curruum in Venzonum 1352-1366". The lengthy and detailed depositions (BCG, *CGAS*, b. 657, "Niderlech") have been mysteriously ignored by recent historiography along with those given in similar proceedings by the witnesses

that "if [the merchants] wanted to further move their merchandise [after the stop in Gemona] they could strike a deal with other carters and transporters as they would have seen fit".[86] Such clause was merely meant to allow merchants to change the declared destination and transporter of their merchandise, but it was later transformed into a compulsory exchange of carts and transporters: merchandises travelling north of Gemona were to be loaded on "German" carts, while those travelling south on "Friulian" carts. As tensions between Gemona and Villach over similar matters seem to suggest, it may very well be that such division of labour, or rather "balanced" monopoly of transport services, existed at an informal level before the 1360s.[87] However, it was not until the 1360s that it had been transformed into an institutional – and thus legally punishable – obligation.

After the victory of Patriarch Ludovico della Torre over Rudolph IV of Habsburg (1365) and the suppression of the treaty of Budweis, Gemona was finally able to "legitimately" enforce both the *niederlech* and *mutatio curruum*. Despite this apparent victory, the patterns of interregional and transalpine trade organization varied very little. Due to the cost-ineffectiveness of transforming the geographical organization of production (building new productive infrastructures, reorganizing supply chains, acquiring information of workers and labour markets, etc.), Venzone retained its role as a direct intermediary with the German-speaking lands as well as that of logistic and exchange hub for iron and steel production in this area.[88] One relevant change, though, regarded transport organization: the lobbying action of Gemona and its urban élite was ultimately successful in creating a compulsory segmentation of transport organization, which would interact and interplay with the structures and practices of interregional division of labour and specialization.

To summarize, the "fiscal-scape" of the Carnic and Julian Alps emerged from various factors that, though independent, ended up creating a thick mesh of overlapping interactions. The consequences of this situation, especially those linked to the organization of production and trade in the area, were neither foreseen nor, strictly speaking, part of the strategy of the actors involved in the process. The fiscal, political, and economic space was thus constructed rather haphazardly by a variety of actors (both political and economic) and factors acting according to very contingent historical stimuli and strategies.

As the process itself unfolded with its irregular pace, the economic actors moved within and, when possible, without the framework of fiscal constraints, influencing in their own way the local struggle for control over fiscal incomes. The production and trade patterns that emerged around the 1350s remained unaltered for at least the following 150 years. Their modification appeared too cost-ineffective in terms of reshaping production and trade infrastructures as well as

appointed by the Gemonese. Only Braunstein, "Le commerce du fer" briefly mentions them.

[86] The *niederelch* parchment is not perfectly legible in this section. The text has been taken from BCUd, *FP*, ms. 892, vol. III, f. 47r: "et deinde si caratores vel vectuales alii conducere vel portare voluerint aliqua mercimonia d alia loca ibidem faciant pactum ut eis melius videbitur expedire".

[87] Zahn, *Austro-Friulana*, 37-8.

[88] Vidal, "The Hinterland of Long-Distance Trade".

in those of political bargaining power required to affect the system as a whole (the so-called "path-dependency"). It follows that fiscality can both mould and be moulded by the economic arrangements of a given society in a bilateral relationship that allows us to define it as a part, rather than mere financing tool, of infrastructures.

4. Production, exchange and labour: making sense of fragmentation

Given the theoretical framework and the overall fiscal arrangements of the area outlined in the previous sections, I would now address the problem of practical organization of production and trade, with a specific focus on transport services and the production of semifinished iron and iron goods. The main source for my analysis is the register from 1426-1427 I have already mentioned, which offers a unique and highly detailed insight into the everyday practices of trade organization. Given the overall stability of the system and the abundance of consistent evidence from notarial sources, the picture that would be sketched from it can safely be applied to both earlier and later years (approx. 1350s-1500s).

Between mid-October 1426 and September 1427, a total of 1027 individual lots of merchandise transited through the toll station. They belonged to 137 merchants and were carried by approximately 367 transporters.[89] Although no month was completely devoid of traffic, transalpine transit in the Julian Alps was a markedly seasonal one, with clear peaks from November to February and from June to September (fig. 3). This pattern appears to be relatively well-established when it comes to alpine transits. A denser traffic during winter and summer and sporadic transits during spring, when melting snow made mountain paths unsafe, were quite usual. However, it would not be wise to downplay other factors possibly influencing traffic intensity.[90]

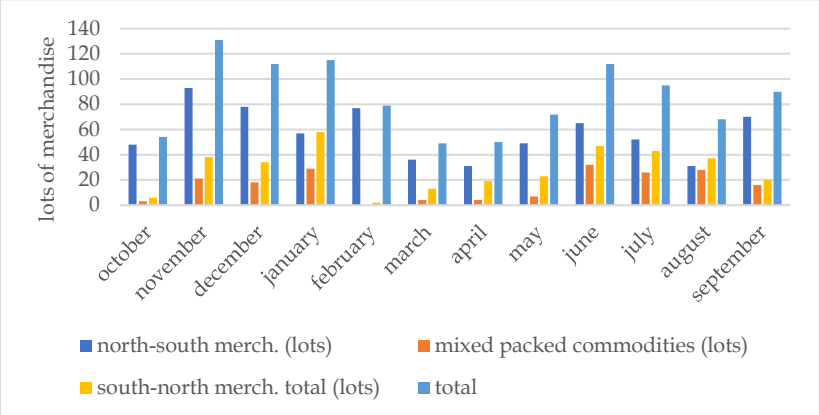

Fig. 3. Individual lots of merchandises transiting through the toll station that produced the register ASUd, *Colloredo Mels*, part I, b. 5, "MIIIIXXVI todeschi".

[89] All data in the section are elaborated from a dataset derived from the register, consultable online at the URL: https://zenodo.org/record/8060450.

[90] See for example the study of a Friulian grain licence register from 1381 in Braunstein, "Guerre, vivres et transports".

The analysis of transits through the toll station of Conegliano, a small borough on the border between the *Patria del Friuli* and the area gravitating on Treviso and Venice, can provide further elements to the analysis.[91] Data from the years 1428-1429 and 1434-1435 allow to demonstrate that the seasonality of transits from German-speaking lands was influenced by the rhythms of Venetian galleys, and by the interregional fair of Treviso. The register of Gemona confirms the role of such "pull factors". The peaks in December and January could relate to the return of the galleys of Alexandria and Beirut, those in June and July with the departure of the same galleys. September and November must be associated with the attraction of the interregional fairs of Treviso (October 18th) or Udine (November 25th).[92] This pattern is particularly evident if we considered what I label as "mixed packed commodities", an assortment of various typically "southern" merchandises bundled together in *balle* that could weigh up to 1.500 kg.[93]

Although registers like this are important for analysing and evaluating the technical features of alpine passage,[94] the following pages will focus on other aspects of transalpine trade and economy: production and transport organization. To assess and define the possible effects of jurisdictional fragmentation on this two distinct yet connected phases of economic performance, specific attention is paid to the patterns of transport of semi-finished iron and iron goods and the structures of transport labour market.

5. **Iron production in the Julian Alps**

As already mentioned, iron production in the Julian Alps during the late Middle Ages had a characteristically "dispersed" organization, which relied on a veritable interregional division of labour. Villach acted as a hub directing raw and pig iron from the mining areas towards the Val Canale, where a thick system of small-scale forges developed under the spur of capitals from Venzone, Gemona, and Udine.[95]

By collecting data from notarial registers, scholars have already reconstructed some of the aspects and structures of this interregional division of labour. Due to the limits of notarial sources, however, no estimate of the overall productivity of the system during the late Middle Ages has ever been produced.[96] On the contrary, toll registers

[91] The data is discussed in Vidal, "Specializzazione e integrazione".
[92] Corbanese, *Il Friuli*, 375.
[93] The weight of the *balle* is discussed in Vidal, "Specializzazione e integrazione", 30-1.
[94] A notable example of this approach is the study by Herbert Hassinger on the Brenner Pass (Hassinger, "Der Verkehr über Brenner"). A thorough bibliographic summary of secondary literature on alpine transits can be found in Furter, "Traffico di transito nell'area alpina tra XIV e XIX secolo."
[95] See above at footnotes 37-39. A stark insight into this system emerges from the account book of Leonardo from Pontebba. He received raw and pig iron from Gmünd, or other Austrian business partners, then produced wrought iron and steel in his forges located in Malborghetto and Pontebba, and commercialized it both in Friuli and elsewhere. Vidal, *Commerci di frontiera*, 135-7.
[96] The diffusion of forges in the Val Canale was first noticed by Philippe Braunstein in the 1960s (Braunstein, "Le commerce du fer"), but only recently scholars have tried to

provide exactly this kind of information. A recent research on the toll of Conegliano, for example, roughly estimates the Friulian iron exports. Around the same period covered by the register of Gemona analysed in this paper, Friulian merchants exported towards Vicenza around 70 tonnes of iron per year through Conegliano and Castelfranco Veneto.[97] Yet, the register from the toll of Conegliano merely stated the origins of the merchants (or transporters) who carried the merchandise, advising caution when identifying the origin of the merchant with a specialized area of production of a given merchandise. Much of these merchants come from the small mountain village of Amaro, which was not an iron production area, but the place of origin of a remarkable group of merchants and middlemen.[98] On the contrary, the toll register of Gemona allows the analysis of the structures of iron production and the assessment of the qualitative impressions derived from notarial registers.

The distribution of iron exports that emerges from the 1426-1427 Friulian toll register is particularly relevant (table 1 and figure 4). First of all, leaving aside the isolated case of the merchants from Bologna/Gubbio,[99] the merchants dealing in iron exports come from a fairly limited set of localities, most of which concentrated along the ridges of the Julian Alps. It comes to no surprise that Judenburg, a vital town located at the centre of a key mining district within the Habsburg domains,[100] heads the group of the iron export localities. It accounted for almost a quarter of the total alone.

explain it within the context of interregional economic dynamics (Scarton, "La falce senza il grano"; Vidal, "The Hinterland of Long-Distance Trade", Vidal, *Commerci di frontiera*, 132-7).

[97] Vidal, "Specializzazione e integrazione", 37-8.

[98] Vidal; Vidal, "The Hinterland of Long-Distance Trade". On the merchants from Amaro, see also Scherman, *Familles et travail à Trévise à la fin du Moyen Âge*, 451-4.

[99] On the 5th of May 1427, apparently uncertain to whom the merchandises belonged, the scribe opened an account to "Nichulo di Gubi o Zuan di Bologna". The two merchants, probably acting as a company – no information on the actual seat of their business is provided – declared they were conducting some 14.000 *libbre* (approx. 6.6 tonnes) of iron.

[100] Von Hektor, "Karte «Wirtschaft Und Verkehr Im Spätmittelalter Um 1500»".

merchant origin	jurisdiction	lots	*libbre*	kg	t.
Judenburg	Habsburg	136	281980	134504.5	134.5045
Tarvisio	Bamberg	145	247500	118057.5	118.0575
Malborghetto	Bamberg	123	188350	89842.95	89.84295
Lusnizza	Bamberg	94	169850	81018.45	81.01845
Marano (=Merano?)*		32	80000	38160	38.16
St. Veit and der Glan	Habsburg	33	69800	33294.6	33.2946
Villach	Bamberg	20	36800	17553.6	17.5536
Wolfsberg	Bamberg	16	36300	17315.1	17.3151
Bovec	Gorizia	18	29900	14262.3	14.2623
S. Caterina	Bamberg	9	22000	10494	10.494
Bologna/Gubbio		7	14400	6868.8	6.8688
Lienz	Gorizia	5	6700	3195.9	3.1959

Table 1. Quantities of iron transited through the toll in 1426-1427 by merchants' origin (ordered by total quantity) * = uncertain identification of locality.

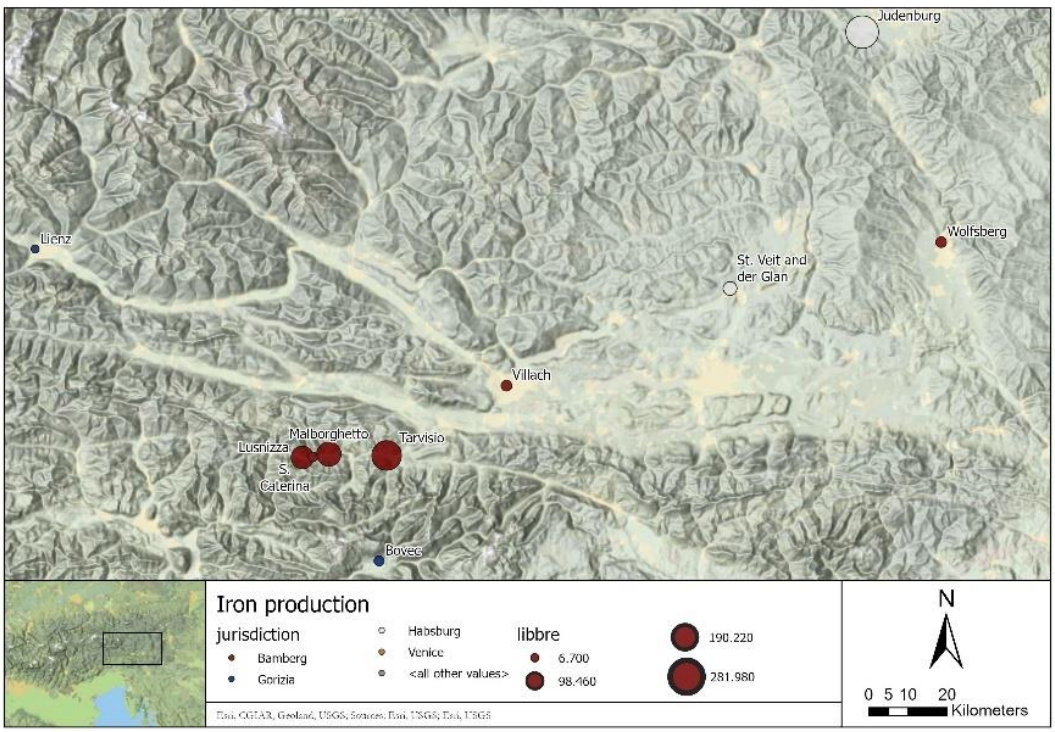

Figure 4. Map charting the data from table 1.

On a more surprising note, Villach, which had been a key centre for iron production and export, so much so it had even "lent" its name to a kind of iron product (the *viahco longo*),[101] played a suspiciously little part within the overall balance of the system and accounted for just over 3% of total transits. The real "stars" of iron exports towards Friuli and the rest of the Po Valley were the small villages and hamlets of the Val Canale: Treviso, Malborghetto, Lusnizza and Santa Caterin. Although they were outdone by Judenburg if considered singularly, they account for more than half of the total volume of iron exports if aggregated.

Since scholars have recently highlighted the relevance of Friulian export-oriented iron production, this fact should not come as a complete surprise. However, the sheer quantities of iron produced in these small mountain villages remains staggering. According to the 1426-1427 register, almost three hundred tonnes of iron were produced in a valley that spanned for some 20 km. This amount should be considered only as a fraction of the total output, since some of the iron could also take alternative routes towards Styria and Carniola (modern day Slovenia). It could even be exempt from tolls if produced under the name of Friulian merchants, who often either owned the forges or had production contracts with the forge masters.[102] Even postulating a minimum output of some 400 tonnes of iron, the area could supply up to twenty small towns like Treviso, whose annual need was estimated in 1433 around 40 *miliari* (approx. 19 tonnes), while falling just short of the optimal iron stock of a metropolis like Venice (1000 *milliari* = 477 tonnes).[103]

Was this distinct specialization a mere consequence of more favourable geographical and labour market conditions, or was it one of the effects of the extreme jurisdictional segmentation of the area? I suggest that none of these options are the only reason, and, in some ways, both can be true at the same time. On the one hand, the environment of the Val Canale was highly favourable to the development of forges and iron production, given the presence of wood and waterpower. On the other, the marginal role of either agriculture and animal husbandry in the Val Canale spurred its denizens towards other occupations, thus providing capital holders with a (relatively) abundant and cheap workforce[104]. Even though such pre-conditions could theoretically foster the development of a proto-industrial system, they cannot account alone for the complex division of labour of the area,[105] especially considering how distant the main iron deposits and mining centres were. In fact, only jurisdictional and fiscal segmentation can explain such specific and "eccentric" development.

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[101] Braunstein, "Le commerce du fer", 268.

[102] Vidal, "The Hinterland of Long-Distance Trade"; Vidal, *Commerci di frontiera*, particularly the published contracts for forge management and iron production at the pages 242 and 245.

[103] Both data, the Venice one dated 1412, are taken from Braunstein, "Le commerce du fer", 276, 290.

[104] This is the "classic" proto-industrial hypothesis. See Epstein, "Manifatture tessili e strutture politico-istituzionali nella Lombardia tardo-medievale. Ipotesi di ricerca"; Grillo, "«Vicus Lanificio Insignis». Industria laniera e strutture sociali del borgo lariano di Torno nel XV secolo".

[105] Even Stephan R. Epstein argues against the "automatic" connection between cheap labour and raw material and protoindustrialization: Epstein, *Freedom and Growth*, 117.

The jurisdictional enclave of the Bishopric of Bamberg encompassed the whole Val Canale (see above figures 1 and 2). It provided the perfect framework to connect Villach with the Val Canale, whose environment and labour "market" were more favourable for the installation of forges. Yet, the fiscal unity of this area would not be enough to foster the development of a de-centralized system of iron production. Even though minor iron mining basins might have existed also in the territory of Villach, the main extracting centres undoubtedly remained Friesach and Judenburg, which were located further north and, most importantly, outside the jurisdiction of the bishop of Bamberg[106]. By adopting a "classical" NIE approach, the whole system would have been hampered and made cost-inefficient by both high transactions costs (including transport of low-value and high-encumbrance commodities over long distances, multiple fiscal and toll costs) and the overall lack of centralization or coordination. Leaving aside any consideration on the (supposed) efficiency of this system, in the next paragraph I would rather analyse the mechanisms and the practices that fostered its development. They were linked to both the transformation of local capitals (economic, cultural, social) in the Patriarchate of Aquileia and the complex comings and goings of indirect fiscality between the two neighbouring alpine areas.

Stemming from the structures and infrastructures of the transalpine transport, Friulan capitals were based on fiscal obligations such as the compulsory stop in Gemona (or Venzone). They were used and invested in the development of regional and sub-regional specialisations on both sides of the Alps. These specialisations complemented each other and also managed to penetrate the Val Canale, whose economic actors were often partners of the Friulan merchants.

A merchant from Florence, Fantone Pini, who acquired the citizenship of Gemona in the late 14th century, provides a good example of the players involved in this area. He was not only an entrepreneur, who invested in the iron forges located in the Val Canale, but also a key member of the local élite, an ambassador for Gemona, and a participant in the lively tax farming system of the town.[107] However, the capitals employed for by entrepreneurs like Fantone were not necessarily accumulated in Gemona or Venzone, whose business élite specialized in the intermediation with the Northern side of the Alps on behalf of capital holders from Udine by the late 1300s.[108] Fantone himself was both the trustee for companies, whose main partner was a capital holder from Udine, and an investor of a number of small companies involved in the commerce of oil, cloth, and wine in Villach, where he bought raw and semi-finished iron.[109]

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[106] See the map produced by Von Hektor, "Karte «Wirtschaft Und Verkehr Im Spätmittelalter Um 1500»".

[107] Davide and Vidal, "Between Carinthia and Venice: Transport, Manufacture and Commerce of Iron Goods in the Patriarchate of Aquileia (1300s-1400s)", in particular § 4.

[108] An overall summary and sketch in Vidal, "The Hinterland of Long-Distance Trade".

[109] See. for example, the company established in 1409 between Fantone and Andrea Monticoli from Udine, where the latter invested 200 ducati; ASUd, *ANA*, b. 5136/15, ff. 77r-78r.

Indeed, the most active tax farmers were not engaged in iron production, but in the lucrative hospitality and logistic business. Between 1382 and 1417, Wenceslas q. *Pheu*, an innkeeper in Gemona, bought the farming for 24 *dazi*, investing a total of approximately 10.000 lire.[110] He bought the *dazi* connected to the lucrative hospitality and logistics business, which was tied to the *niederlech* system he himself was a part of.[111] On one side, iron production in the Val Canale addressed the never-ending demand for low-end, everyday iron goods, and was supplied by "foreign" capitals from the towns of Friuli; while, on the other, the logistic systems, which made the *niederlech* possible, was at the centre of a positive feedback mechanism. Entrepreneurs involved in logistics and hospitality, like the innkeeper Wenceslas, systematically bought the farming rights for taxes and staple rights, and thus accumulated capitals they further invested in the same sector.

Lastly, the complex system of exemption centred around the town of Venzone must also be addressed. Both the special fiscal regime that it managed to secure when re-entering the Patriarchate of Aquileia and its inclusion within the Habsburg domains from 1351 to 1365 contributed to consolidating an intricate system of intermediation and bilateral partnerships. When the "extraordinary" fiscality supposedly (or officially) ceased, the system was deeply rooted. After 1365, production and specialization were so dependent from the intricacies of cross-border capital movements and trade, that they survived the contingent conditions which fostered their development and remained lively and functional up to the 1500s.

Iron production was not the only area where division of labour can be identified and described thanks – also – to the 1426-1427 register. Transport services and organization were characterized by specialisation, albeit on a smaller, "intra-regional" scale. By comparing the main localities producing iron to those whose transporters were entrusted most lots of commodities, we will notice a clear negative correlation (figure 5).

[110] Data from Sbarbaro, *I dazi di Gemona del Friuli*, 217-8.

[111] He bought 6 times the farming right for the *niederlech* (1388, 1391, 1392, 1396, 1397, 1417), 4 times those for the intermediation tax (*messeteria*) (1392, 1396, 1413, 1415), and a total of 5 times those for wine commerce, counting both retail sale tax (1382, 1398) and the all-encompassing *dazio* on wine (1395, 1398, 1402).

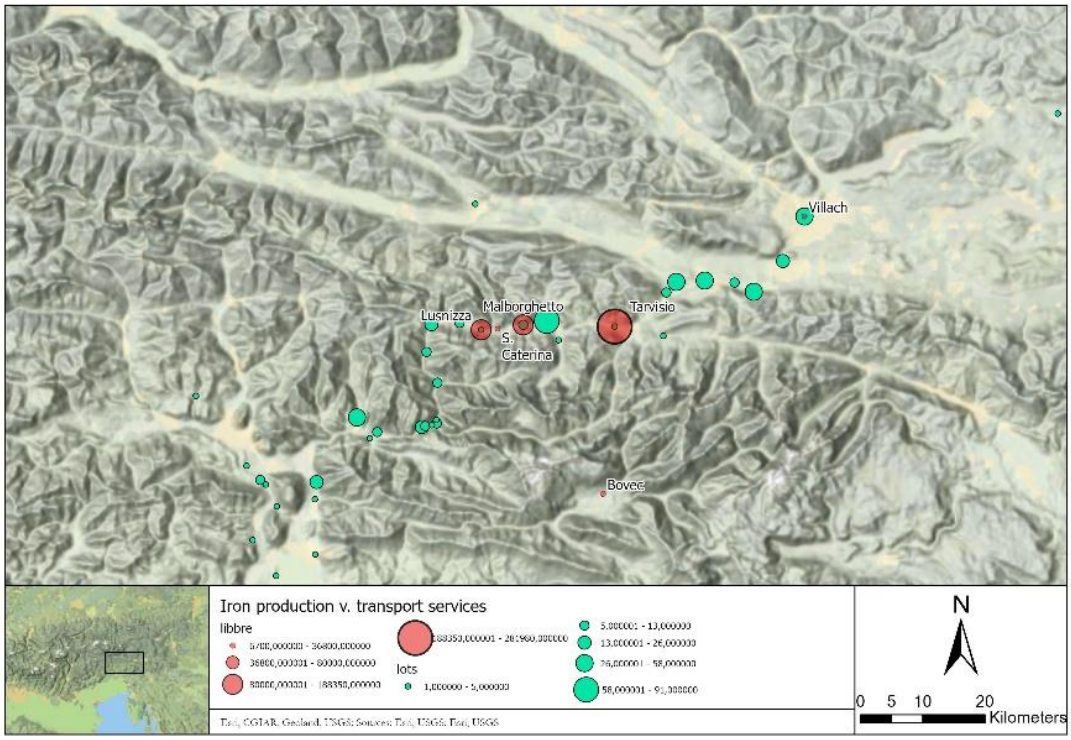

Fig. 5. Map charting iron production and transport services as declared in the toll register from 1426-1427.

The villages that specialized in iron production (Tarvisio, Malborghetto, S. Caterina, Lusnizza) offered much less transport services than the other localities of the Val Canale. These were specialised in providing transport services, exploiting the need for cart and transport exchange, which was dictated by the complexity of transalpine trade and consolidated by forms of fiscality such as the *niederlech*. In the last section of this contribution, I will finally assess and analyse the structures of transalpine transport services organization.

6. **Transalpine transport services and their network**

As stated above, the organization of transport in the Julian Alps during the late Middle Ages (especially commercial transport) dealt with a complex patchwork of factors. It ranged from technical-practical issues (accessibility of the roads, haulage capacity of carts and chariots etc.) to economic (availability of workers) and "extra-economic" or financial ones (compulsory stops, tolls, controls). Since not much new can be said on technical-practical factors, which were fairly uniform throughout western Europe over the *longue durée*,[112] the debate on the often ill-represented and undervalued land transport

[112] Jope, "Veicoli e Finimenti"; Corbiau, "Une charette du XIe-XIIIe Siècle".

could only be renewed thorugh the analysis of the effects of economic and "extra-economic" factors.

First of all, both the toll register from 1426-1427 and the court depositions on the *niederlech*, which are dated to the 1390s but referred to the previous 30 to 40 years, seem to suggest the existence of a complex and stratified transport labour system. Even though a substantial part of labour transport was still performed by non-specialists within the wider framework of multi-activity peasant labour,[113] as early as the 1350s – and increasingly in later decades – some individuals turned into transport specialists. They were able to concentrate labour supply either by themselves or through various forms of dependent labour and subcontracting. In the 1390s, for example, one of the witnesses called by the commune of Venzone to testify against the *mutatio curruum* imposed by Gemona was a transporter (*auriga*), who started his tenure some fourteen years earlier. He testified that Rubeus from Buia (a small castle south of Gemona) often transported foreign, i.e. presumably German, merchandises from the port of Latisana up to Venzone, and sometimes a single convoy could consist of up to 20 four-wheeled chariots.[114] The same court register also bears evidence to the presence of a substantial number of individuals who engage in transport work on an episodic basis.

Quantitative data from the toll register from 1426-1427 further confirm qualitative data from court depositions and notarial deeds. Charting the transport organization in a SNA graph can help unpacking and analysing relations within the network (figure 6).

[113] Bardoneschi, "Les véhicules".

[114] BCG, *CGAS*, b. 658, "Niderlech mutation curruum in Venzonum 1352-1366", witness Michele son of Strasino *de Chicono*.

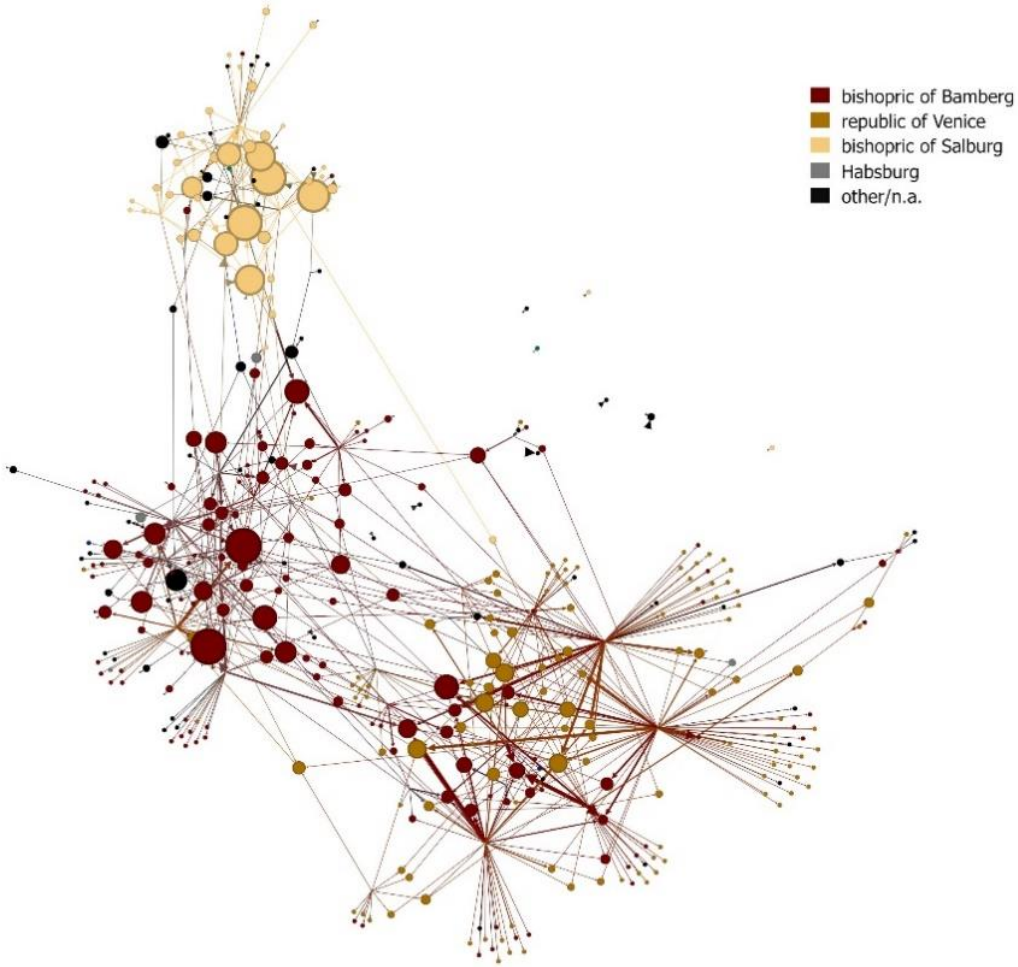

Figure 6. Graph charting the social network of transport organization. Node size indicates the "in-degree", colour indicates the jurisdiction of merchants and transporters. Data from ASUd, *Colloredo Mels*, part I, b. 5, "MIIIIXXVI todeschi". Graph created by the author on Gephi with a linear-attraction, linear-repulsion model.

A first relevant measure that helps us analyse transport organization is the "degree", i.e. the number of connections (edges) that each individual (node) was able to create. Given that transport was a form of labour agreement whereby a merchant entrusted his commodities to one or more individuals, the "in-degree", i.e. the number of merchants from whom each individual received transport commissions, are particularly relevant for this research. (table 2).

In-degree	12	11	10	8	7	6	5	4	3	2	1	total
Bamberg	2			3	4	3	4	15	11	21	63	126
Cilli											2	2
Gorizia											3	3
Habsburg									2	1	1	4
n.a.					1			2	3	9	44	59
Salzburg	2	1	2	2	1			3	4	13	15	43
Venice						4	3	3	11	25	72	118
Pontebba*						1		2	1		2	6
Total	4	1	2	5	6	8	7	25	32	69	202	361

Table 2. Distribution of "in-degree" among transporters split by jurisdiction. * = Pontebba was split between Venice and the Bishopric of Bamberg.

A remarkable differentiation can be noticed among the group of the transporters. On the one side, most individuals (271) appear to receive transport commissions episodically (1-2 different merchants). On the other, a small group (33) was composed of transport "specialists", who engaged in the activity on a constant basis by transporting commodities for 5-12 different merchants. Between these groups, there are 57 individuals, who worked for 3-4 different merchants, but did this activity on neither a constant nor episodical basis. This structure is coherent with qualitative data that have been earlier analysed. It outlines the existence of both occasional and highly specialized, even "entrepreneurial" transporters. As expressed by the statistical Indicator of the relevance of each node in connecting all the others (table 3), there is a clear correlation between the number of different merchants that employed the transporters and the latter's betweenness centrality. In other words, the role of transporters as brokers connecting other individuals (including merchants) to a wider network was proportional to the number of different merchants they were engaged with, i.e. their degree of "professionalism".

		In-degree	betweenness centrality
in-degree	Pearsons's r	-	
	p-value	-	
betweenness centrality	Pearsons's r	0.757***	-
	p-value	<.001	-
Note. * p < .05, ** p < .01, *** p < .001			

Table 3. Correlation matrix of "in-degree" and betweenness centrality of the transporters group.

Also (see again table 2), episodical and "professional" transport services were unevenly distributed from a geographical (or rather jurisdictional) standpoint. Episodical transporters were concentrated in the jurisdictions of Venice and Bamberg, i.e. the areas closer to both

the toll stations and towns that enjoyed the staple right of the *niederlech* (Villach, Venzone, and Gemona).

This specific distribution can be explained by considering the segmentation of jurisdictional and fiscal space, which influenced the patterns of transport organization on two levels. On a more basic level, the necessity of transport exchange, whether coercive, like the *mutatio curruum*, or "physiological" to the transalpine trade (e.g. going from horseback to carts and chariots), meant that areas and regions on the two sides of the main alpine passes had a constant demand for transport services. On the supply side, this was reflected by both specialization and widespread occasional participation. On a more nuanced level, jurisdictional-fiscal segmentation was mirrored by the segmentation and division of transport services. By looking at the graph charting the transport network, three main aggregations, more closely connected, could be noticed. They all coincide with three distinct jurisdictional areas (figure 7).

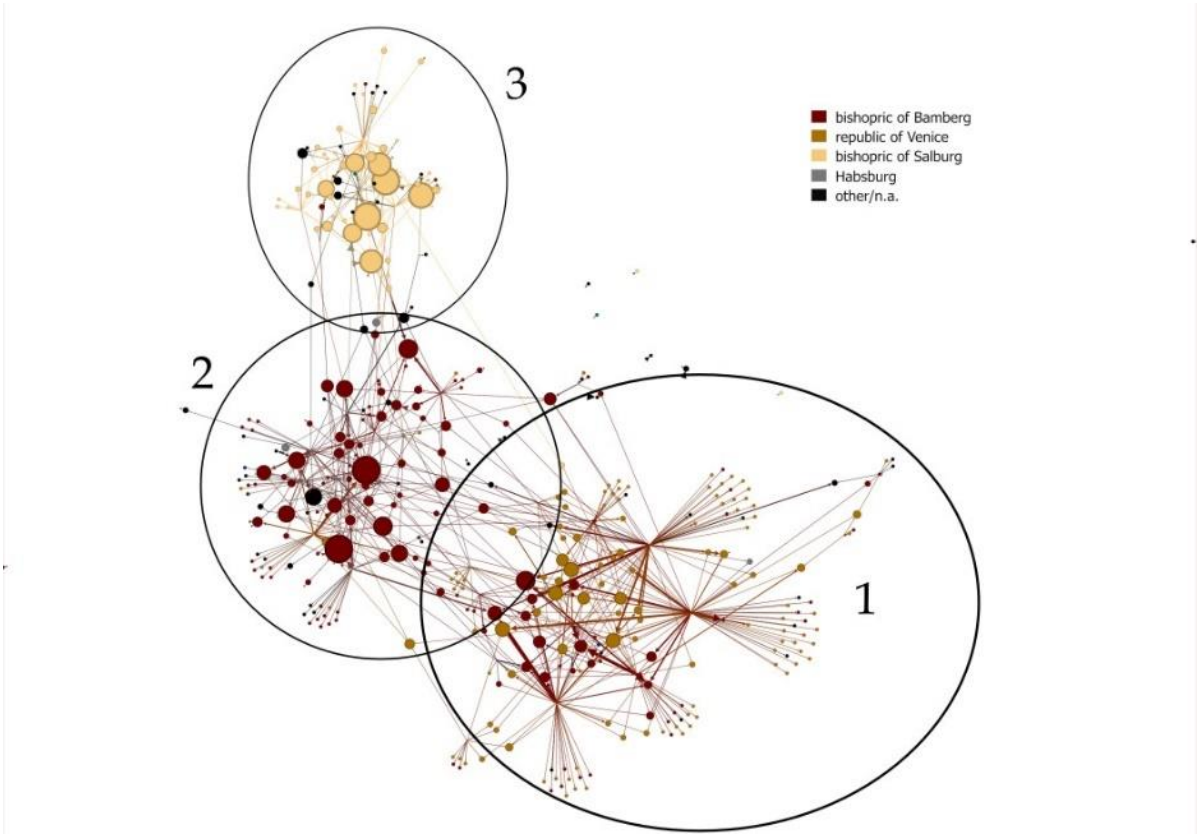

Figure 7. Graph of the transport network highlighting the main groups.

The first group (1) is the transport system used by the iron merchants from the Bishopric of Bamberg, who mostly came from the small mountain villages of the Val Canale (Tarvisio, Malborghetto, Lusnizza). It was a local transport system, which was used to cover the short distances spanning from the iron forges in the Val Canale to the logistic hubs of Venzone and Gemona. Most of the iron merchants

entrusted their merchandise to occasional transporters coming from the jurisdictions of Venice and Bamberg, but they could also have relationships with professional transporters. The latter, and especially individuals from the towns, castles, and villages under jurisdiction of the Bishopric of Bamberg (Pontebba, Ugovizza, Villach, Strassfried, Arnoldstein, Krainegg), bridged the first group and the second (2), which involved merchants from the Habsburg towns (mainly Judenburg and St. Veit). The second group engaged in longer-distance transport, relying more specifically on transport professionals from the Bishopric of Bamberg. The last group (3) was composed by the merchants from the Bishopric of Salzburg. It was more loosely tied to the others and developed a rather "self-referenced" set of relations. In fact, the merchants from Salzburg entrusted their goods almost exclusively to professional transporters from the neighbouring market town of Kuchl. Consequently, while transport services might have already become a marketed commodity,[115] the transport labour market was far from neutral and impersonal.

7. **Conclusions**

Key factors like proximity, regional and sub-regional specialization, the varying degree of professionalization of transporters and, obviously, jurisdictional-fiscal areas played a role in shaping and influencing the merchant's choice. Such constraints have usually been considered an obstruction to proper capitalist and "modern" economic development but may have not been so for past societies, as the late medieval transalpine system shows. In the case of iron production, the regional and sub-regional division of labour was tied to a set of different factors, such as the contingencies of politics and fiscality, and the transport services developed around supposed blockages. It produced a system that offset alleged transaction costs with a complex scheme of exemptions and personal and political networks. On a second level, fiscal and jurisdictional fragmentation could have also offered more chances to local populations to engage in a wider variety of activities (often collateral to agriculture) than a more streamlined system, though the sources to measure this effect of fiscality are rather scarce. However, lower classes involved in production or transport in a surbordinate role did probably not enjoy any of the perks that local élites, who were involved in tax farming, commerce, and production, provided for themselves.

Yet, the study of fiscality and its connections to economic development should not be a matter of advocating for protectionism nor of making excuses for inequality (like trickle-down economics). On the contrary, it could become an occasion to ponder on our own dogmas and prejudices on economic development. By suspending judgment on both the idea of linear development and on the overall "naturality" and perfection of capitalist markets, the phase of "primitive accumulation" could be analysed with different perspectives, rendering a sharper and more accurate image of past economies.[116] Thus, phenomena like specialization and division of

[115] The characteristics of transport labour, whose productivity depended substantially on standardized factors (carts and draught animals), allowed for precocious standardization of tariffs. See the discussion in Frangioni, *Milano e le sue strade*, 137-68.

[116] The idea of studying the "trajectories of [the primitive] accumulation" rather than the traditional transitions from feudal to capitalist societies has been put forth by Jairus

labour could appear on different scales, ranging from sub-regional to interregional. They also appear to be influenced and even fostered, rather than hampered, by the nuanced interplay between the technical-physical structures of trade, the entanglements of mercantile networks and, of course, the delicate dynamics of politics and fiscality, in other words, the all-encompassing concept of infrastructures.

Banaji in 2008. An articulated discussion can be found in Banaji, *Theory as History*, 333-48.

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Biblioteca Civica di Udine (BCUd)
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