The urban systems of the Balkan and Danube Provinces (2nd – 3rd c. AD)

Donev, D.

Chapter VII: Conclusions

The genesis of the settlement map: towns and imperialism

Until the end of the Republic, Roman rule over the Balkan Peninsula spread almost by osmosis, following the path of least resistance. The principal goals on which Roman imperialism had set its sights in the early second century BC were the Illyrian and Macedonian kingdoms and the northern Adriatic.[1049] Both regions were conquered at about the same time and they became the principal bases for further expansion into the Balkan interior and the Danube Valley. In its expansion, the Republic wanted to be sure that it hade secured control over the main routes to the Apennine Peninsula. It was a move that made sense in a foreign-policy strategy in which defence and aggression were juxtaposed.[1050]The Roman presence in the eastern Adriatic was maintained indirectly, through alliances with the Issaeans and some of the polities on the Adriatic littoral.[1051] The occupation of the Dalmatian coast proved to be a much more gradual process, peppered with a number of military setbacks. The close connections between the coastal zone and the plateaus of the Dinaric Alps meant that direct control of the littoral would remain tenuous as long as Rome had no influence in the Dinaric Alps. Rome had no known precedents for such an arrangement in the eastern Adriatic. Earlier Greek colonists had either failed to establish a firm foothold on the coast or they had simply never contemplated it.[1052] Nor had the Roman Republic been very much more successful in this respect. Narona might have become a Roman base as early as the middle of the second century BC, but the struggle for Salona continued into the middle of the first century BC.[1053] In fact, the Dalmatian coast was finally secured only after Octavian's campaign in 35-33 BC.[1054] Similar patterns can be observed on the western Black Sea coast, a region in which environmental conditions were very different to those in the Adriatic. Rome conquered the coastal zone after the fall of Mithridates VI, but its authority in this area was finally asserted only in the first years of the Principate.[1055] In the inland, the Thracian kingdom retained its nominal independence until the reign of Claudius.[1056]. Nearly century and a half separated the Roman victory over ancient Macedonia and the conquest of the central Balkans.[1057]

Modern scholarship has often been imprecise in its claims that this dynamic of conquest was dictated by the varying degree of integration of the conquered areas in the Mediterranean cultural and economic sphere.[1058] It is dubious if the peoples who inhabited the central Balkans or the Dalmatian interior were any more prepared to become a part of the Roman world in the late first century BC than they had been one century earlier. Many parts of the Balkan Peninsula still had difficulty in

[1049] Hammond 1968, 1-21; Wilkes 1969; Mócsy 1974; Hammond, Wallbank 1988; Šašel 1992, 408-431; Bandelli 2004, 95-139; Dzino 2010.
[1050] Šašel-Kos 2005; Eckstein 2008.
[1051] Wilkes 1969, 29-36; Čače 1991, 55-71; Šašel-Kos 2005, 291-334; Dzino 2010, 44-60; 61-79.
[1052] Suić 1976; Kirigin 2002, 363-385; Kirigin 2006, 17-26.
[1053] Suić 1976, 132; Dzino 2010, 64.
[1054] On Octavian's accomplishments in Dalmatia see Šašel-Kos 2005, 455-471; Dzino 2010, 99-116; discusses the opinions of earlier scholars.
[1055] Pippidi 1975; Velkov ed. 1979; Suceveanu, Barnea 1991; Avram ed. 1999.
[1056] Velkov ed. 1979, 280-286; Velkov 1981, 473-483; Tačeva ed. 2004.
[1057] Papazoglou 1969; Gerov 1980, 147-167; Mirković 2007.
[1058] Velkov 1981, 473; Bojanovski 1988.

shaking off their Iron Age heritage until well into the third century AD.[1059] Nevertheless, this is not to say that the native societies had not evolved prior to the Roman conquest. However, it should be emphasized that an equally fundamental transformation had also occurred on the other side of the Adriatic. Up until the middle of the first century BC, signs of direct Roman involvement in the subjugated parts of the Balkan Peninsula are very few and far between. There are no traces of army camps and – with the exception of the Via Egnatia – major infrastructural projects in these areas in the period between the time of the conquest and the Battle of Actium. Until the early second century AD, no new towns were founded in the regions captured prior to the Principate. The swift imposition of direct rule on these parts of the Balkan Peninsula could only be achieved because of the political and economic institutions already established there, reinforced by urban development and the existing road network. There was no need to commit large military and administrative resources to areas that were capable of managing their own affairs. The initial terms of agreement after the Battle of Pydna in 168 BC stipulated that the Macedonians organize their own defences against the marauding tribes of the central Balkans.[1060] The Roman soldiers, administrators and entrepreneurs had no difficulty moving into and settling in towns that provided the basic amenities of urban living. Whether one believes that strategic planning played a part in Rome's foreign politics or not, undeniably a great number of immediate benefits were enjoyed from the conquest of these areas.

It is not that the continental Balkans or the Danube region were lacking in developed settlement hierarchies in the centuries prior to the Roman conquest. Despite the vexing chronology, in certain parts of the study-region – Dacia, Pannonia – there are clear signs of differentiation between the settlements in terms of size, architectural elaboration and economic activities.[1061] Intriguingly, only a handful of sites were retained from the pre-conquest settlement network in these regions. The strongholds in the core of the Dacian kingdom were destroyed in the course of Trajan's wars of conquest and were never again reoccupied.[1062] There is no evidence of a violent end to occupation at the systematically researched *oppida* in Pannonia and Dalmatia. Most of these settlements were gradually abandoned in the first century after the Roman conquest.[1063]

It is uncertain a search for a general cause behind the divergent developments in the coastal areas and the Balkan interior is a justifiable excercise. A process of gradual decline leading to a final abandonment was also observed among a number of Epirote or Illyrian *poleis*, areas in which much of the pre-Roman settlement network was maintained after the conquest. In the great majority of cases these were towns and town-like settlements located in the marginal and less productive corners of the province[1064]. Even more significant is the fact that most of these sites were off the main corridors that linked the region to Italy. Rome's conquest of these areas disturbed the hierarchical order of the pre-existing road-networks. Micro-regions that were relatively important on a local or regional level were completely marginalized after the establishment of the new network of roads, port-towns and shipping lanes that tied the conquered corners of the Mediterranean to Rome. Data that might provide some explanation of the abandonment of the integral settlement network in the continental

[1059] Gerov 1980, 349-359; Josifovska-Dragojević ed. 1982; Bojanovski 1988, 72-73; Oltean 2007.
[1060] Livy XLV 29. 14; Papazoglou 1988.
[1061] Daicoviciu ed. 1981; Lockyear 2004, 33-74; Oltean 2007, 60-118; Majnarić-Pandžić 1984, 23-34; Gabler 1991, 51-73; Hüssen, Irlinger, Zanier eds. 2004; Maráz 2008, 65-93; Dizdar 2016, 31-48.
[1062] Lockyear 2004, 43-44; Oltean 2007, 207-213.
[1063]Bojanovski 1974; Nováki, Pető 1988, 83-99; Gabler 1991, 51-73; Slapšak 2003, 243-257.
[1064] Irmaj: Prendi, Budina 1972, 25-54; Margeliç: Davis et al. 1998-2002; Shpuza 2009, 481-502.

Balkans and the Danube region had yet to be unearthed. Nonetheless, in some areas – the Dalmatian hinterland, the core of the Dacian kingdom – it is obvious that the constellations of hill-forts or settlements perched on high terraces served the political and strategic interest of the regional power-players.[1065] Adding to the problem is the fact it is impossible to be sure if the emergence of these strongholds was supported by an autonomous productive sector or whether it was entirely dependent on the local political and ideological arrangements. If the main centres of Late La Tène Pannonia or Classical Dacia were little more than strongholds of the local dynasts, the demise of the complete settlement network with the loss of political independence is not hard to understand.[1066] It is striking that literally all Pannonian settlements that were integrated into the new settlement map – Siscia, Poetovio, Mursa - occupied sites of major strategic importance to the Roman Empire.

Other factors might also have had a hand in the radical transformations of the regional settlement maps after the Roman conquest. Two important points that should be remembered is the small size of the pre-Roman *oppida* and their inaccessible sites. Regardless of the particular factors that prompted these developments, the fact remains that the incorporation of the Balkan interior and the Danube Valley would have been untenable had the same methods applied in the case of ancient Macedon or the coastal areas been used. The military campaigns of conquest were only the first step in the long process of subjugation and occupation of the barbarian segment of our study-area. The final incorporation of this zone into the provincial administrative system of the Roman Empire required massive investments in troops, material resources as well as technical and administrative personnel. The early chronology of the large infrastructural projects in Dalmatia, the Iron Gates in Moesia and Thrace suggests that these measures were the basic prerequisite for securing full military control over these mountainous areas and setting up the mechanisms that would enable the efficient exploitation of their resources.[1067] The large number of permanently stationed troops had to be garrisoned in camps built specifically for that purpose and the abandonment of the old civilian centres meant that new urban bases were needed for the settlement of veteran soldiers and the administration of the demilitarized parts of the region. In other words, the conquest of the areas that fell outside the borders of the Hellenistic *koinon* and had not yet developed any stable, state-organized societies was a far more expensive proposition than the incorporation of the *polis*-dominated coastal zone or the highly urbanized societies of ancient Illyria, Macedonia or Liburnia. Not only were the conquest and subsequent control of the inland areas logistically demanding, the benefits to be accrued from governing these untamed regions were dependent on a long series of expensive infrastructural and administrative measures that would have been impossible to implement without a stable political system and indisputable chain of command. Consequently, it is no accident that the final push for the conquest of the continental Balkans was launched only under Augustus and his successors. The extension of the frontiers of the Empire to the banks of the Danube required a major shift in imperialist strategies and methods.[1068]

The different paths by which the coastal and inland zones were brought under Roman rule were inevitably reflected in the regional urban networks and settlement patterns. Even in areas in which the continuity from the pre-Roman period was merely topical, the territorial and settlement sizes

[1065] Benac 1985; Oltean 2007, Figure 4.1.
[1066] *Cf*. Fol 1965, 309-317.
[1067] Petrović 1970, 31-38; Tudor 1974; Bojanovski 1974, 15-18; Šašel 1977, 237-244; Petrović 1986, 41-53; Mirković 2007, 21-24; Madžarov 2009.
[1068] Erdkamp ed. 2007; Dzino 2010, 23.

differed significantly from those encountered in the Balkan interior and on the Danube. It is possible to observe certain tendencies towards homogenization between these two zones, - see below – but, generally speaking, the divide persisted until the period of the Late Empire at least. However, if the aim is to make a fair assessment of the origin of the regional settlement network, the pre-Roman-Roman divide should not be taken as read. Although it is technically correct to state that 30% of all settlements included in this analysis were pre-Roman foundations, – a high percentage in view of the fact that the coastal zone and Roman Macedonia comprise less than 15% of our study-area – actual topographic continuity has been observed in fewer than 10%. Only residual remains survive from the pre-Roman phases of the remaining settlements that trace their roots to the pre-conquest period. Their size and importance in pre-Roman times must remain matters of conjecture. The urban fabric of these towns was unquestionably created after the Roman conquest and they probably formed part of a new regional hierarchy. Full continuity was limited to the coastal sections colonized by the Greeks, Epirus, parts of Roman Macedonia and Liburnia.

Therefore, the newly founded settlements held by far the greater share in the settlement network of our study-area. Depending on the number of settlements classed as uncertain, the post-conquest settlements comprised between 50 and 65% of the integral settlement network, excluding the sites known only from the written sources. Even if two-thirds of the settlements included in this study are dated to the post-conquest period, their share is low relative to the size of the belt of newly founded towns and settlements. In this context it should not be overlooked that the great majority of the new foundations were settlements of minor size and rank: road-side and auxiliary *vici*, ports of call and *emporia*. Focusing solely on the towns with a securely attested autonomous status, both segments of the network contribute a roughly equal number of towns; a striking testimony to the differences in urban density between the two principal zones of our study-area.

The advance of the Roman legions in the direction of Central Europe terminated on the Danube. The relatively early date of the first military installations and major infrastructural projects in this region – predating the founding of the first civilian settlements in the regions behind the *limes* – leave absolutely no doubt that the Danube was the main military objective at the time of the conquest of the Balkan interior. However, it is not possible to make a step farther and decide if the river was perceived as a convenient, defensible line of demarcation or if it simply happened to coincide with the limits of imperial expansion by accident.[1069] Whichever of these two reasons comes closer to the truth, the establishment of full military control over the entire length of the river and the large engineering projects in the Iron Gates transformed the Danube Valley into one of the most highly frequented corridors in this part of the Roman Empire. The Danube was naturally connected to the Mediterranean Basin through the Black Sea, and a number of major roads traversing the Balkan Peninsula opened links to the Aegean, the Adriatic and northern Italy. In later historical periods the river was not navigable along its entire course. Only in the late nineteenth century did modern engineers succeed in repeating the Roman achievement with the construction of a navigable canal that bypassed the cataracts in the Iron Gates.[1070]

The high level of connectivity of the Danube Valley was crucial to the maintenance of the extensive military sector. Over 40% of all newly founded settlements and almost one third of all settlements

[1069] Fulford 1992, 294-305; Whittaker 1994; Bennett 1997; Rankov 2005, 175-181.
[1070] Petrović 1970, 35-36; Šašel 1973, 80-85.

included in this analysis grew up next to military camps. Over half of these settlements were located on the Danube *Limes*, amounting to about 22% of all newly founded settlements in the study-area. This count is conservative because it excludes those civilian settlements that emerged at the sites of former military camps plus the few settlements founded on the left bank of the Danube in Roman Dacia. The density of settlement in the Danube corridor was among the highest in the study-region. Distances between neighbouring settlements rarely went beyond 30 km, approaching the urban densities in the coastal areas. Although the great majority of these settlements were small military outposts, they do include seven of the ten largest agglomerations in the study-region. Even in this densely occupied landscape, there was room for no fewer than three *coloniae* and two *municipia* in those sections of the Danube that did not face the *Barbaricum*.

Of course, the military sector was not limited to the Danube frontier. In all frontier provinces as well as in Thrace and Dalmatia, a small number of garrison settlements were located away from the actual frontier itself. These areas were not crucial to the defence of the Empire, but they were either strategically too important to be left in the hands of the local elite – because of their natural riches or position in the regional road network – or failed to develop local institutions suitable to carry the burden of self-government. Roman Dacia was an exceptional case, as over 70% of the agglomerated settlements in this province grew up next to military camps. This is not related solely to the length of the Dacian *Limes*.[1071]. Almost two-thirds of the settlements in the interior of the province were also attached to army camps. Such was the legacy of the violent campaigns waged during the conquest. Most of the native aristocracy had perished in the wars against Rome, leaving Roman Dacia with a greatly reduced urban substrate.[1072] Nevertheless, the most important implication of this extension of the military sector beyond the confines of the frontier zone is its limiting effect on the categories of civilian settlements. By usurping the micro-regions that were endowed with valuable natural resources and by replacing or superseding the local institutions, the military reduced the base for independent urban growth.

There is a danger of over-emphasizing the importance of the military sector. As in making the distinction between the pre-Roman and newly founded settlements, the dividing line between the categories of garrison and civilian settlements is blurred. In a number of cases, the civilian settlements that emerged a short distance from the military camps or from certain parts of the *canabae* were granted town charters and local autonomy. It was in the government's interest to promote local autonomy, wherever socio-economic conditions were ripe for it.[1073] The partial municipalization of the extensive military sector would have been welcomed with open arms by the provincial government, because it guaranteed a tax-income and simultaneously lowered the costs of administration. Far more significant is the often-raised objection that the size of the military sector, expressed as the share of the garrison settlements in the integral settlement network, is out of proportion to the percentage of the total population made up by soldiers and the civilian communities that regularly accompanied them. We are not in position to advance concrete estimates for the number of permanently stationed soldiers and still less for the total population of the provinces. However, it is possible and indeed highly recommended that the implications of the extreme scenarios be considered. The size of the army in the frontier provinces in the Severan period can be estimated to have been in the range of 110,000 to

[1071] Gudea 1997.
[1072] Ruscu 2004, 76-87.
[1073] Vittinghoff 1968, 132-142; Piso 1991, 131-169.

135,000.[1074] Assuming that the soldiers' families and the communities of small entrepreneurs that followed the army units amounted to three times the size of the military personnel,[1075] and that there was a total population of 4.4 million in the frontier provinces,[1076] the military sector will be limited to no more than 13%. It is possible to lower the projection for the total population and increase the proportion of the military sector, but not by more than 7 or 8%. Therefore, even in the most militaristic projections of the settlement and demographic structure of the frontier provinces, the percentage made up of the garrison settlements was higher than the share of the military community in the total population of the frontier provinces.

This discrepancy between the estimates expressed in population numbers and number of settlements does not undermine the preponderance of the military sector. It actually emphasizes the ubiquity of the military on the settlement map of our study-area. No more than one-fifth of the population in the frontier provinces dominated about 40% of all major, non-agrarian settlements. Besides underlining the degree of dispersal of the military sector, this ratio also reflects its conspicuousness in the archaeological record. There can be no doubt that the civilian sector was more extensive than that of the military, but the number of civilian agglomerations that left traces in the archaeological record was much lower in comparison to the garrison settlements. This fact was determined either by the small size or by the poor architectural heritage of the settlements that belonged to the civilian sector of the provincial societies. Outside the category of autonomous towns, it is very difficult to recognize those civilian settlements that belonged to the non-agrarian sector. Hence, the conclusion that the histograms in Chapter Three do not reflect the true structure of the settlement system. However, what they do offer is an accurate image of the distribution of monumentality and urban appearance across the different settlement categories. In a nutshell, the military might not have been the strongest sector numerically, but archaeologically, its settlements are the most conspicuous.

Three distinct zones can be recognized in the urban geography of the Balkan Peninsula and the Danube Valley. These correspond to the areas subjugated at different stages of the Roman conquest of the region, or to areas in which different administrative and exploitative mechanisms were used. The areas identified are the coastal belt of old urbanism, inherited from the preceding era, and the frontier zone, coinciding with the Danube Valley and the Dacian provinces. The untamed Balkan interior and Trans-Danubia constitute the third zone on the urban map of the study-region. It was the control and exploitation of this third segment of the area in which the Roman conquerors almost met their match. The difficulties of governing this vast, mountainous region are epitomized in the Great Pannonian Revolt of AD 6. Obviously, the Romans underestimated not only the sheer size of the area, but also the capability of the native population to mobilize its manpower and material resources without the

[1074] Pannonia: Visy 2003; Gudea 2013, 459-658; Dacia: Petolescu 1980, 51-60; Protase 1980, 253-257; Diaconescu 2004, 87-142, gives somewhat higher estimates; Cupcea, Marcu 2006, 175-194; Moesia Superior: Cupcea, Marcu 2006 191-192; Moesia Inferior: Gerov 1997, 3-84; Gudea 2005, 317-566.
[1075] *Cf*. Carrington 2008, whose projection for the civilian-to-soldier ratio in the frontier zone is closer to 2.5.
[1076] The projections for the total population of the Danube provinces are based on our city-size estimates and the variable rates of urbanization of between 10 and 20%. Only the size-estimates for the autonomous towns are taken into account and the urban density is fixed at 150 inhabitants per hectare. Depending on the values of the basic parameters, the total population of these provinces at the time of the Severan dynasty falls in the range of 2 to 4.4 million. We have opted for the high estimate because it is a close match for the estimates advanced by Frier 2000, 787-816; Scheidel 2007, 38-86, derived from the estimated carrying-capacity of these regions. However, other scholars have proposed more conservative estimates, see, for instance, Gerov 1997, 50-52, projecting not more than a quarter of a million people in Moesia Inferior!

assitsance of a stable state apparatus.[1077] Radical measures like colonization, relocation of the troublesome native groups and expensive investments in infrastructure were essential prerequisites if a firm hold over the Balkan interior was to be secured.

The founding of the civilian towns was but one component in the long-term imperialistic policy. The founding dates of the towns in the Balkan interior hint at their role in the administration and economy of the region. With the exception of a few Claudian foundations – Aequum, Savaria – spread along the western edge of the region, most of the colonies in the continental Balkans were created under the Flavians, at about the same time as the defences on the Middle Danube were consolidated. The urbanization of the interior followed a similar path in the eastern half of the peninsula. Here it coincided with the conquest of Dacia and the establishment of the Lower Danube *Limes*. Up until that point, the basic administrative units in this part of the peninsula had been the Hellenistic *strategeiai* inherited from the Thracian kingdom.[1078] The chronological coincidence between the establishment of the frontier zone and the founding of the first towns in the interior reflects the strategic connections between these two segments of the urban map.[1079] The security of the interior of the Balkan provinces depended heavily on the control of the Danube corridor but, without urban bases in the background of the Danube *Limes*, its maintenance would have been demanding logistical impossibility. There are grounds for supposing that this purely strategic link between the military and civilian sectors was transformed into stable socio-economic relations that continued at least until the period of the Tetrarchy.

All the Roman colonies in the interior of the Peninsula were situated at major inter-regional crossroads. They were the crucial link between the frontier zone and the Roman bases on the eastern Adriatic coast. Furthermore, they were also preordained to become the main pillars of Roman power in the Balkan interior. The colonies were more than just centres in which loyal citizens could live and from which recruits for the legions could be drummed up. They were extremely instrumental in the exploitation of the natural riches of the Balkan interior and assisted in the administration of the area. Later in the conclusions, in the discussion of the possible causes of the differential growth between the settlements studied, the special role of the colonies in the regional economies wil be revisited. Theirs was an undertaking that clearly set them apart from the other categories of urban settlements.

The network of Roman colonies in the Balkan interior was too sparse to have provided full administrative control of the area. This segment of the urban map of the peninsula was the weakest link in the chain that connected the frontier zone to Italy. At the time of the Flavian dynasty, there were only half a dozen colonies in the continental Balkans, spaced hundreds of kilometres apart.[1080] The next stage in the urbanization of the region, the municipalization of the Balkan interior and Trans-Danubia, was a part of an effort to extend the urban network to the most remote corners of the area and to fill in the large gaps between the colonies. This was a gradual process and, as has been seen throughout this study, it was not always brought to a successful conclusion. The locations of the settlements that belong to this urban category, in conjunction with the stagnation in their urban

[1077] Šašel-Kos 2005, 99-114.
[1078] Jones 1937, 10-11; Gerov 1980, 83-92; 229-238; Tačeva 2004, 58-78, 105-114.
[1079] *Cf*. Poulter 1980, 729-744.
[1080] It is no wonder that some scholars have compared the urban network of the region to what are known as corridor systems, originally attested in early colonial America; Burghardt 1979, 1-20.

growth, suggest that the primary role of these offshoots of the urban network was local administration.

The secondary agglomerations and special-purpose settlements – road-side settlements, ports of calls, mining *vici* and thermal baths - were the final block in the urban architecture of the region. Although too little is known about these settlement categories, the small amount of information available suggests that they were not only newly founded, but that they often post-dated the establishment of the civilian towns. It is impossible to be sure about the extent of the network of secondary agglomerations. The best that can be done is to make a rough projection of their number on the basis of the ratio of self-governing towns to auxiliary *vici* in the military sector, the only segment of the urban map for which we can claim a complete reconstruction. Alas, this projection is not particularly reliable as it is deduced from the patterns observed in a linear settlement system – the Danube *Limes*. The expectation would be that the patterns in the interior would have been two-dimensional and, consequently, that the number of secondary agglomerations would have been somewhat greater than what we have predicted.

An alternative explanation is that this economically discrete sector was not attached to distinct settlement categories but that its bases were distributed among the existing rural settlements. This interpretation is supported by a couple of important epigraphic documents from Roman Thrace and it is parallelled in later historical periods in this region. In principle, the question of whether a separate category of special-purpose settlements actually existed or whether these functions were attached to the agrarian sector is not very relevant to the present study. The very fact that these settlement categories are often impossible to distinguish from the average farming settlements is a strong indicator of their rank and station in provincial society. Even if there was a separate category of secondary agglomerations, in terms of size and architecture, they would have been indistinct from the ordinary village. Hence, it is interesting to mention that there is hardly any evidence of spontaneous growth in this segment of the settlement network. In the few instances in which we have come across sites that belong to this settlement category, the evidence tends heavily towards state-sponsorship rather than growth from below.[1081]

On that note, we have to conclude that the genesis of the settlement network in the Balkan and Danube provinces was a process driven primarily by military and strategic considerations. The incorporation of the pre-Roman settlement network in the Hellenized parts of the Balkan Peninsula was an element of the expansionist politics of the Roman Republic. The underlying principal of contemporaneous Roman imperialism was to expand into areas that had developed stable local institutions and produced taxable surpluses. These preconditions were absent in most corners of the Balkan interior and the Danube Valley and therefore their assimilation by the Roman Empire required a systematic campaign of colonization of the area; an undertaking that whould have been impossible without large infrastructural projects. It was essential to break up the existing settlement and road-networks and re-integrate the newly conquered region along a different set of axes.[1082] This goal was so crucial it could not be left to the whims of the autonomous demographic and economic developments. The radical transformation of the regional settlement maps could only be achieved within a reasonable time-frame by the direct intervention of the central government and the military.

[1081] IG Bul III/2: 1690; Mihailov ed. 1964; Gerov 1980, 319-348.
[1082] *Cf*. Burghardt 1979, 6.

The army provided a ready pool of administrators for the conquered regions and it created most of the urban and road infrastructure. In the Balkan interior and Trans-Danubia, this role was taken over by the Roman colonies, often occupying the former military bases. However, in the Danube region, Dacia and in the interior of most of the Balkan provinces, the military continued to play a major role in the local administration. Even in the regions dominated by the peregrine communities, the *municipia* were founded at previously unoccupied locations, and settlers from Italy were an influential element in the epigraphically attested segment of the population. Traces of central planning are visible in all tiers of the newly established settlement hierarchy.

Charting settlement size: the distribution of wealth and population

By all standards, the pre-Roman town in the Hellenized parts of the Balkan Peninsula was small. With a few exceptions, the built-up areas of the majority of the pre-Roman *oppida* fell within the size range of 5 to 15 ha. Firmly anchored on its acropolis and occupying settlement niches that offered only limited space, most of these towns did not expand after the Roman conquest. There is very little evidence of the emergence of lower towns, and the small number of new constructions and traces of repairs to the extant public buildings suggest that the old urban cores were respected. Even the few newly founded towns in the zone of pre-Roman urbanism or the towns that were thoroughly rebuilt after the Roman conquest did not exceed the size of the average pre-Roman *oppidum*. Only a handful of towns – representing between 10 and 15% of the urban network - were larger than a central place typical of this region, but the margin was rarely greater than 100%. These were the principal bases of Roman colonization in this area and, strikingly enough, they correspond to the Roman colonies – roughly speaking the second-tier settlements - in the newly founded segment of the network. Any extraordinary growth – a label appropriate to settlements larger than 50 ha - was limited to the settlements in the top-tier of the regional hierarchies, the provincial capitals and the largest port-towns.

The high urban density in the zone of pre-Roman urbanism limited the room for the emergence of special purpose settlements or subordinate central places. Because of their close spacing, the old *poleis* and *oppida* would be able to perform most of the services usually associated with these settlement categories. The few road-side *vici* and ports of call that have been identified archaeologically fall in the lower end of the size-range for the average *polis* and, in some cases, they covered less than 5 ha. Many would argue that these were ordinary rural settlements that performed certain non-agrarian functions.

In the zone of newly founded towns and settlements, the settlement-sizes are scattered across a much wider range and they are greater on average than in the zone of pre-Roman settlement. This is unsurprising in view of the differences in the art of town-founding between the two chronological zones of the settlement map. The greatest contributors to the discrepancies between the size-ranges of the pre-Roman and newly founded settlements are the legionary agglomerations. The legionary camps on their own already rank as medium-to large-size settlements in the zone of pre-Roman urbanism. Most importantly, no permanent legionary camp existed in isolation. As soon as the construction of the fort was complete, irregularly planned agglomerations would begin to surround

the camp on all sides except that facing the enemy lines. These settlements, known as *canabae*, were three to five times the size of the legionary camp and, although building activity was sparse in the initial phases, gradually, they were densely packed with buildings.[1083] The legionary camps-*cum*-*canabae* were agglomerations unparallelled in terms of size and physical appearance in the zone of newly founded towns and settlements. The La Tène *oppida* and earlier prehistoric settlements were many times smaller and size-ranges approaching them were not reached in the Danube area prior to the High Middle Ages.[1084] If it is decided that the civilian *vicus* or town that in some cases arose a short distance from the camp formed a part of the same agglomeration, the legionary settlements will qualify as large even from an Empire-wide perspective.[1085]

Despite being two to three times smaller than the legionary agglomerations, the largest of the civilian towns – composed of almost exclusively Roman *coloniae* - were also also exceptionally big by the standards of the Balkan interior. They were as large as the top-tier settlements in the zone of pre-Roman urbanism and regularly outstripped the largest of the *poleis*. Regularly laid out on level ground, these settlements defied the rugged geography characteristic of most corners of our study-region. In contrast to this, the pre-Roman *oppida* and *poleis* always conformed to the size and shape of the micro-topographic units they occupied. On account of their layout and micro-locations, the newly founded civilian towns also had great potential to outgrow their original urban limits, although admittedly evidence of quarters outside the *pomerium* is not particularly abundant. This could be an intimation that the walled areas were never fully built-up, but the quality of research at most of these sites is such that that future research might bring to light evidence of the existence of suburbia in the major Balkan towns.

The remaining civilian towns in the Balkan interior and the Danube Valley fall into size-ranges comparable to those encountered in the zone of pre-Roman urbanism. The majority of them coincided with the Latin *municipia* or the newly-founded Thracian towns. The position of this size-category in the settlement hierarchies of the frontier provinces is ambiguous. This ambiguity is not only because of their small size in relation to the major civilian towns. A small group of secondary agglomerations – mostly made up of auxiliary *vici* – equalled the civilian town in size or even outgrew the smallest among them. Together they formed a separate category that, *qua* size fell in between the major autonomous towns and the base of the settlement hierarchy, consisting mostly of auxiliary *vici* and other special-purpose settlements. This differentiation had little or no consequence for the formal settlement hierarchy in the provinces, as the largest among the auxiliary *vici* were often granted local autonomy. The settlements that belonged to this intermediary size-category were not subordinate to the major autonomous towns. Both categories performed a similar range of functions, although there is certainly a reason for arguing that the strength and extent of their economic bases were not equal.

Had it not been for the presence of the auxiliary *vici*, the base of the settlement hierarchy in the frontier provinces would have been extremely reduced. In the absence of town walls or public

[1083] Aquincum: Gabler, Wellner 1976, 3-77; Zsidi, Furger eds. 1997. Carnuntum: Kandler 2008, 90-108.
[1084] Size-estimates for pre-Roman *oppida* in Pannonia: Majnarić-Pandžić 1984, 25-26; Károlyi 1985, 391-419; Szabó, Guillaumet, Cserményi 1994, 107-126; Maráz 2008, 65-93; Maráz 2009, 121-124; post-Roman: Holl 1979, 105-145; Kubinyi 1981, 161-178; Hoššo 1996, 471-487; Štefanovičová 1996, 463-470; Sándor 1996, 443-453; Torma 1996, 399-411; Syklósi 1996, 375-397; Holl 1997, 95-101; Horváth 1997, 79-90; Procházka 1997, 67-77; Niedermaier 1997, 55-66; Fabini 1997, 43-53; Heitel 1997, 39-42; Entz 1997, 35-38.
[1085] Pounds 1969, 135-157; *cf*. De Ligt 2012, for the size-estimates for the Italian towns at the time of Augustus.

buildings, the secondary agglomerations of civilian character are archaeologically invisible in the Balkan interior and the Danube Valley. Because over 80% of the known auxiliary *vici* were concentrated in the frontier zone, it is virtually certain that data are missing for the great majority of the settlements that functioned as secondary agglomerations. It would not be too wide off the mark to assume that these were road-side settlements not larger than 10 ha with no stone-built architecture. Hence, the recovery rate for this settlement-category is certainly much lower than for the garrison settlements.

The settlement-size distributions in the two urban zones in the study-region formed similar settlement hierarchies, although there were differences in the composition of the individual tiers. In both areas it has been possible to distinguish a hierarchical base of varying width and two or three higher settlement-tiers, each composed of a small number of larger towns and settlements (Figures VII_1-16). In general, the hierarchies derived on the basis of the settlement size distributions do reflect the formal settlement hierarchies determined by the variable distribution of juridical status and administrative prerogatives. With a few exceptions, the *coloniae* were always larger than the Latin *municipia*, while a *polis* with a large *conventus* of Roman citizens was regularly larger in extent than the predominantly peregrine *polis*. The provincial capital was invariably the larger of the two legionary agglomerations in the frontier provinces. This statement would imply that the settlement systems were fairly rigid, the size and importance of the individual settlements were determined largely by their juridical status. The most apparent symptom of this inertia is the presence of multiple settlements in the top-tier of the settlement hierarchy. Despite the short distances that separated the legionary settlements, their political importance guaranteed a roughly equal volume of investments in both agglomerations, and this would have kept them within the same size-range. Of course, in almost every province there were a few exceptions – either autonomous towns that joined the base of the settlement hierarchy because of their small size or secondary agglomerations that exceeded the 15-ha threshold –, but overall, there was a positive correlation between juridical status and settlement size. Most of the communities whose juridical status was low lived in small- or averagely-sized settlements that had no monumental architecture. Large settlement size and monumental architecture were exceptional outside the group of autonomous towns and military agglomerations.

Despite the apparent similarities, it has to be stressed that there was at least one important difference between the hierarchies in the two settlement zones of the study-area. It lay in the composition of the bases of the settlement hierarchies. In the zone of pre-Roman urbanism, the great majority of the third-tier settlements were autonomous towns but, in the continental Balkans, the bulk of this size-category was made-up of subordinate central places and rural settlements.[1086] This difference is obviously a legacy of the divergent paths by which the settlement networks in the two zones had been created. There was neither any room nor any need for secondary agglomerations in the highly urbanized belt of pre-Roman urbanism. In contrast to this, the secondary agglomerations would have been crucial to the organization of economic life in the sparsely urbanized zone of newly founded towns and settlements. Moreover, it is certain that the pre-Roman *oppida* and *poleis* that belonged to the bottom tier of the settlement hierarchy were not much larger than their counterparts in the Balkan interior. However, as befits their greater age and renown, they are better represented in the archaeological and written record than the newly founded road-side and mining *vici*. Consequently,

[1086] *Cf*. the case of Roman Egypt in which most of the settlements that would qualify as urban by their size in other Roman provinces were villages, Tacoma 2006, 21-68.

there is a case for arguing that the base of the settlement hierarchy was more urban in the zone of pre-Roman urbanism than in the zone of newly founded towns and settlements. On account of their autonomous status, even the smallest pre-Roman *poleis* kept their urban appearance. Converesely, urbanism failed to reach the newly founded secondary agglomerations, even when they functioned as market and service centres for areas not much smaller than the territory of the average *polis*. Yet again, juridical status has proved to be the crucial variable. Important economic functions did lead to increased settlement size and wealth, but only when they are found in conjunction with autonomous status.

Approaching the end of this study, it seems reasonable to accept the view that the settlement size distributions are roughly coterminous with the distribution of wealth.[1087] This is not necessarily a general feature of all settlement systems, but taking into consideration the principals of town-founding and civic munificence, it is very appropriate to the Classical Mediterranean civilizations and the Early Roman Empire in particular. Among other factors, the secondary agglomerations in our study area were consistently smaller than the autonomous towns because they were not home to an urban elite. The main urban substrate in the period of the High Empire was the landowning aristocracy. Hence the postulation, that the larger the town, the more numerous and wealthier its urban elite would be, and the higher the number of towns that qualify as large by regional standards, the more even the distribution of wealth. It would be extremely illustrative to compare the share of the major towns - coinciding with the first- and second- order settlements – in the overall settlement networks of the individual provinces of our study-area. Unfortunately, this would not be an easy undertaking, because there are no reliable data on which to establish an accurate picture of the share of the bottom tier of the settlement hierarchy. There will always be a degree of uncertainty about whether the small number of low-ranking settlements is a result of the rural character of this segment of the settlement hierarchy or if it is just a reflection of the low degree of research in the Balkan countryside. However, regardless of this problem, a couple of interesting observations can be made if we accept the figures at their face value. Ignoring the hierarchical pyramids of Thrace and the northern Adriatic that are grossly incomplete, and considering the conservative size-estimates, the percentage of settlements that belong to the first two orders of the settlement hierarchies ranges between 7 and 13% (Figures VII_1-16).[1088] The differences between the individual provinces are subtle, tending if anything to underline the overall uniformity of the settlement hierarchies. Nonetheless, the first- and second-tier settlements participate with somewhat higher percentages – between 12 and 13% - in the settlement systems of Pannonia Superior and Macedonia. In the remaining provinces in the study-area, the large towns made up less than 10% of the settlement network. This estimate is not affected by the relatively narrow bases of the settlement hierarchies in Pannonia Superior and Macedonia; at least not in the case of Roman Macedonia, in which the third settlement tier is better represented than in the frontier provinces. Pannonia Superior was exceptional with its three settlements in the top settlement-tier and the large size of its colonies, whereas Macedonia had numerous micro-regional centres that

[1087] See, for example, Lo Cascio 2009, 87-106.

[1088] Macedonia 25% according to the maximum, 12.5% according to the minimum size estimates; Dalmatia 40.3% according to the unlikely maximum, 8.6% according to the minimum size-estimates, Pannonia Superior, 17.3% with the maximum, 12% with the minimum size-estimates; Pannonia Inferior, 7.6% with both estimates; Moesia Superior 7-8% in both scenarios, Moesia Inferior 17% with the maximum, 7.1% with the minimum size-estimates; Thrace 20% with the maximum, 16.6% with the minimum estimates, Dacia 9.5% in both scenarios.

outgrew the provincial average. Both provinces had a strong civilian sector and – if the Dalmatian coast and the Danube *Limes* are excluded - were among the most urbanized parts of the study-region.

The individual province is not an ideal unit of analysis. Throughout this study it has often proved a struggle to formulate concise observations, precisely because different segments of the settlement zones were united in the individual provinces. The provincial borders were not always drawn along the lines that separated the zones of pre-Roman and newly founded towns and settlements. The settlement systems of Dalmatia, Moesia Inferior and Thrace had mixed origins. This divergence has proved a major obstacle to trying to observe consistent differences in the quantitative properties of the pre-Roman and newly founded settlement systems. Other factors, like the extent of the military sector or the local geographical conditions, also exerted an equivalent influence in the shaping of the rank-size graphs for the individual provinces. Consequently, it is very difficult to attribute certain tendencies in the rank-size distributions to the chronology of the settlement network or the variable shares of the military and civilian sectors.

By far the most common trait shown in the rank-size graphs of the individual provinces of the study-area has been their concave shape. Concave rank-size graphs have been encountered in both the demilitarized and frontier provinces, but they are the outcome of different sets of circumstances and cogently they also display important differences. In the demilitarized provinces, the rank-size graphs remained entirely above the power trend-line and the slope-gradient of the best-fit line was gentler than in the frontier provinces, in which half of the curve fell below the power trend-line. Settlement size decreased at a much lower pace in the demilitarized provinces, reflecting the uniformity of the settlement systems that were made up of towns that were the centres of similarly sized micro-regions and were loosely related to each other. The mountainous character of the western Balkans would have considerably pushed up the cost of movement between the different corners of the region. The upshot was that the settlement network in this area was a conglomerate of more or less largely independent cells. This state of affairs was reinforced by the Roman government that respected the independence of even the smallest autonomous unit; a policy that can be traced back to the conquest of the area. Under these conditions there was little room for predatory behaviour and differential growth between the old *poleis*.[1089]

The potential for differential growth was not limited only by endogenous factors. What determines the concave shape of the rank-size graphs is the size of the top-ranking settlement, always smaller than predicted by Zipf's Law[1090]. This was not necessarily determined by the relatively even distribution of wealth and resources between the individual settlements. To some extent, this scenario can be transferred to Macedonia, but not to Dalmatia, a province that included a large number of newly founded settlements and non-urban territories. Although it is impossible to speak of equity among the administrative units of Roman Dalmatia, the provincial capital and top-ranking settlement was much lower than predicted by Zipf's Law. The reason for this discrepancy was the role of the Dalmatian capital in the wider urban system of the Roman Empire. Salona was Rome's *emporium* on the eastern Adriatic coast and only a proportion of the wealth extracted from the Dalmatian interior remained in the provincial capital.[1091] In spite of the fact that the settlement system and economy of Roman Dalmatia cannot be defined as poorly integrated, it can be argued that the difficult terrain

[1089] *Cf*. De Ligt 2016, 17-51.
[1090] Johnson 1980, 234-247.
[1091] *Cf*. Marzano 2011, 196-228.

would have reduced the intensity of the horizontal relations between the individual settlements. In this province, the concave rank-size graphs indicate that its settlement system was a segment of a much wider dendritic network centred on Rome. Of all the provinces in the study-region, Dalmatia was the one most highly integrated with Rome.

Whereas the concave shape of the rank-size graphs in Dalmatia can be attributed to the system partitioning, a more feasible explanation for the concavity of the rank-size graphs in some of the frontier provinces – the Moesian provinces and Dacia – is that they are a result of pooling in parts of different settlement systems.[1092] In these provinces, the cause of the gentle slope gradient in the upper halves of the graphs was not the small size of the top-ranking settlements – often twice as large as the second-ranking settlements – but the high frequency of the settlements falling in the high and medium size-ranges. In fact, there are more settlements in the upper size-ranges than predicted by the power-law. The most obvious example is the settlement system of Moesia Inferior, uniting the newly founded settlements along the Danube frontier and the Greek colonies on the Black Sea coast. The settlement system of Roman Dacia also consisted of three separate sub-systems, one of which belonged to a different geographical area. In all of these instances, we see duplication in size and rank between the settlements in the higher size-ranges. If separate rank-size analyses are carried out for the Dacian provinces, the shape of the resultant curves becomes even more convex than concave. A similar explanation can be offered for the rank-size graph for the urban system in the integral study-area (Figure VII_17). It offers a typical example of a concave pattern, almost 100% of the size-figures falling above the power trend-line. This result goes some way towards confirming our doubts about the integrity of the study-region that were raised in the opening chapter of this study. The Balkan and Danube provinces were never conceived of as a compact socio-economic unit of the Roman Empire, even though they formed a distinct strategic frontier at the time of their conquest and were later united into a single customs-zone.

Only the settlement systems of the two Pannonian provinces deviate from the predominantly concave rank-size graphs observed in the other provinces and in the study-area as a whole. The hybrid shapes of the rank-size graphs of the Pannonian provinces hint at a duality in their settlement systems; one that could be plausibly argued was inherent in all frontier provinces, but that was distorted by the composite nature of the settlement systems of Dacia and the Moesian provinces. In the rank-size graphs for both Pannonian provinces, there was a visible gap between the settlements that belonged to the upper and lower size-ranges. The trends in the upper and lower halves of the graphs appear disconnected that brings them very close to the so-called double concave patterns associated with settlement systems in which a new urban substrate was superimposed on an existing layer of low-ranking settlements.[1093] In the Pannonian provinces, although there is no chronological divide between the two urban substrates, there is a strong case to argue that the largest settlements in these provinces – the legionary agglomerations and major civilian towns – formed a separate sub-system that was only very loosely integrated into the group of low-ranking settlements. The principal demographic and economic currents in these provinces tended to be carried out between the legionary agglomerations and the largest of the civilian towns. The remaining towns and settlements

[1092] Johnson 1980, 240-241.
[1093] Falconer, Savage 1995, 37-58; Savage 1997, 233-244.

played only a minor role in these transactions and hence they formed a separate settlement sub-system with a shallow hierarchy.

The observations that can be made about the spatial distribution of the different size-categories are extremely insightful, especially as they allow us to get rid of the bonds of the administrative divisions. Freed of these restrictions, a few general patterns can be singled out. Broadly speaking, the settlements in the western Balkan provinces were smaller than those in the frontier provinces, a difference that happened to coincide with the divide between the zones of pre-Roman urbanism and newly founded settlements. To a large extent this division was dictated by the contrasting environmental conditions in the two principal settlement zones in the study area. Quite clearly, the newly founded settlements in the pre-Roman urban belt did not grow any bigger than their pre-Roman neighbours, and indeed some of the rare pre-Roman settlements in the belt of newly founded towns were among the largest urban settlements in the entire study-region. Because the great majority of the settlements were largely dependent on local resources, there is a consistent difference between the size of the settlements in the Dinaric region of the Balkan Peninsula and in the Danube provinces and Thrace.

Far more revealing is the distribution of the settlements that belong to the highest size-ranges. Three-quarters of the settlements that measured 50 ha or more were located on the periphery of the study-region. This distribution cannot be attributed wholly to the fact that over half of the largest settlements were represented by the legionary agglomerations located on the Danube *Limes*. The largest of the civilian towns were also located on the edges of the study-region - the Adriatic and Ionian coasts and along the Amber Road. The peripheral parts of the study-region were not only the most densely populated sections, they also included the largest settlements in the regional system. This urban preponderance of the periphery is one of the defining features of the settlement map of the Balkan and Danube provinces. Wealth and population were concentrated along the main axes that connected the region to Italy and the Mediterranean and – on account of its strategic importance – the Danube *Limes*. The most outstanding feature on the regional settlement map were the gateway communities that channelled the flow of resources from the Balkan interior to Italy and the principal bases of military and political power, and not as might be expected, the administrative and economic centres in the interior of the area. This coincidence between extraordinary settlement growth and peripheral locations in the regional networks can also be observed among the low-ranking settlements. The largest among the auxiliary *vici* were those that were located on the natural exits from the regional units of which the frontier zone was made up. As already pointed out, the settlements that dominated the central parts of the study-region were in control of the main inter-regional crossroads that linked the peripheral belts of the system. They were more or less evenly distributed across the Balkan interior, indicating that their primary role was the administration and the exploitation of the natural riches of the region. The relatively small number of settlements that belong to the latter category in conjuncttion with their moderate size encapsulates the rationale behind the settlement system of the Balkan and Danube provinces in the period of the High Empire. Its primary goals were the defence of the external frontiers and the uninterrupted flow of taxes and natural resources from the Balkan Interior to Italy. The major civilian towns in the Balkan interior –the true Balkan towns it could be said – were just ancillary elements, indispensable to the normal functioning of the regional system, but reduced to the minimum. It was a system in which wealth and resources were siphoned off from the geometric centre of the region through a small number of valves and were then channelled towards its main poles and from there beyond its limits.

Towns and territoriality: the working of the Roman towns

Neither the pre-Roman *polis* and *oppidum* nor the newly-founded town could be said to have occupied an optimal location for exploiting the agricultural resources in their surroundings. The choice of either hill-top locations or access to the sea usually meant that the pre-Roman towns had to make do with reduced agricultural territories. Only rarely did the arable zone extend over more than 50-60% of the areas enclosed by the 5-km catchment radius. Because of the sizeable military sector – the majority stationed along the *limes* – it could be argued that the siting of almost one-half of the newly founded settlements – including the civilian towns that developed from former military camps – was not determined by agrarian considerations alone. The majority of these settlements were located on the frontier, meaning that about one-half of their theoretical hinterlands would have been located on the other side of the frontier. Furthermore, as the civilian towns in the interior often grew up bedise river-crossings, unknown proportion of their catchments was probably covered by marshes. This situation is a sharp contrast to many of the subordinate central places and settlements that acquired urban status only in Late Antiquity, often in control of hinterlands that were almost 100% fertile. A trait common to nearly all urban settlements in the study-region, regardless of their origin and socio-economic profile, is that their role was not as purely agrarian settlements.

This is not to say that agricultural considerations played no part in the siting of the Roman towns. Looking at the urban geography on the Dalmatian coast, the conclusion has to be that literally all major coastal plains were occupied by autonomous towns or port-settlements, but not every natural harbour attracted permanent settlements. Only the towns that controlled the largest and most fertile valleys in Epirus and Macedonia survived the conquest and retained their urban character under the Empire. Nearly all of the newly founded civilian towns were located in the centres of large, agriculturally productive micro-regions. The municipalized portion of Roman Dacia coincided with the fertile Mureş Valley and the Haţeg Depression rather than the eastern Transylvanian Plateau. High agricultural productivity and high population density were the basic prerequisites for the emergence and normal functioning of the ancient town and undeniably ancient urbanism and agricultural fertility seemd to be the two sides of the one coin.[1094] Although the micro-locations of the majority of the Roman towns failed to ensure access to larger agricultural territories, this does not mean that the agricultural base of the urban economies was squeezed. It merely indicates that most of the urban population was not directly involved in farming. Judging by their micro-locations, only a small number of Roman towns actually functioned as agro-towns, although theres is a good case to think that an unknown proportion of the urban population were at least part-time farmers.

Reviewing the data, we have discovered that there was no point in comparing the agricultural potential in the theoretical hinterlands of the different settlement categories included in this study. The local agricultural riches were determined primarily by the character of the regional geographies. Regardless of their rank and juridical status, the settlements in the western half of the peninsula were always more hindered by the lack of agricultural resources in their immediate surroundings than the settlements in the Danube region or in the Great Thracian Plain. The amount of arable land in the immediate surroundings of the settlements was dictated chiefly by the ruggedness of the local terrain and hence had less to do with their economic orientation. Far more indicative in this respect is the

[1094] Boserup 1965; Scheidel 2007, 75; Lo Cascio 2009, 88.

effect of the increased catchment radius on the size of the agricultural territories. Prior to the invention of mechanized transport, specialized production closely followed the distribution of raw materials. Indeed, most of the settlements that were fully dependent on the local agricultural resources would have made only marginal gains with the extended catchment radius. Those focused on the exploitation of non-agricultural resources would usually have increased their agricultural potential, both in absolute terms and in percentages. However, this was not a general rule. The effect of the increased catchment radius was also directly related to the character of the regional geography. Most of the Pannonian settlements would have gained sizeable quantities of new arable land with the extended catchment radius, even when there was no evidence of a strong non-agrarian sector. More importantly, because the settlement categories that were involved in specialized economies were normally those without autonomous status, it is unlikely that they would have had access to the areas located beyond the 5-km catchment radius. Although the size of the agricultural territories was not particularly sensitive to the economic orientations of the settlements, it proved quite revealing in all other respects.

Only a small number of settlements were too big to have been wholy supplied by the agricultural resources of their immediate surroundings. The great majority of the settlements for which the archaeological and written evidence suggests economic specialization – road-stations, mining *vici* and thermal baths – were small enough to have lived off the resources available locally. Non-agricultural production was not concentrated in large urban centres. There were no large mining or manufacturing towns in the Balkan and Danube provinces. The maximum size-estimates of the few mining *municipia* that are attested archaeologically are extremely unreliable. The small size of these settlement categories was a logical solution to the problem of exploiting the metalliferous corners of the study-region or providing transport services in the narrow gorges of the major Balkan rivers. Having proved the worth of this economic strategy, there was no incentive for the areas of variable agricultural productivity to cultivate the emergence of strong horizontal relations. Most of the settlements that specialized in non-agricultural economies could meet their grain demand from the limited agricultural capacity of their immediate surroundings. Even if they grew too big for the agricultural resources of their hinterlands, their food supply was not left to the whims of the market forces. The micro-regions that abounded in rare natural resources or were strategically important were administered directly by the provincial government that, presumably, took care of the grain supply for the communities that were involved in the exploitation of these areas. In view of the remote locations of these micro-regions, most of the imported grain must have come from the neighbouring surplus-producing areas.

The minimum urbanization rates in the hinterlands of the secondary agglomerations reveal they comprised no more than 10% of the maximum population that could have been supported by the local agricultural resources. In reality, this percentage must have been somewhat higher, but even so, the low land-to- population ratio is another confirmation that data for a large number of settlements that belonged to this sector are still few and far between. It is unlikely that the small number of mining settlements included in this analysis were the only agglomerations of this type in the study-area. The productivity of the mining districts was to a large extent dependent on the availability of skilled labour. The communities of miners must have been distributed among permanent or seasonal camps, the remains of which are difficult to identify in the archaeological record.[1095] By the same token, there is

[1095] Miners' camps are attested in the epigraphic record from Alburnis Maior in Dacia, Russu ed. 1975; *cf*. Domergue 1990.

a good case for arguing that the auxiliary *vici* – especially those in control of the fertile micro-regions that were not located in the frontier zone – were the most conspicuous, but not the only – nor even the largest - agglomerations in their catchment areas. The continuous presence of the army at sites located hundreds of kilometres from the Danube *limes* is difficult to explain unless it is assumed that the areas in question were very strategic and well populated.

Small settlement size was not an exclusive attribute of the category of special purpose settlements. The dense urbanization on the eastern Adriatic coast – one of the densest urban systems in our study-area – was only possible at the cost of the size of these towns. Their agricultural territories were greatly reduced by their proximity to the sea and the narrow coastal zone. These settlements belonged to the same size-range as the secondary agglomerations, but they were much larger than the latter in proportion to their agricultural territories. Even taking the minimum size-estimates or projecting a lower population density in the port-towns, their population would still have amounted to at least 30% of the agricultural capacity of their market catchments. This is a plausible projection for the degree of centralization in the coastal areas, especially in view of the limited agrarian resources and the high urban density. There was no room for an extensive rural sector on the Dalmatian littoral and this could have been one of the crucial elements in the persistence of the dense urban system in this agriculturally marginal zone. A relatively large number of coastal settlements did overstrain the grain production capacity of their immediate surroundings by a small margin, although they never really outstripped them. Obviously, the coastal zone could always fall back on other types of food resources that often provided higher amounts of calories per unit of arable surface than grain.[1096] Furthermore, the high connectivity of these settlements offered access to the produce of the entire Adriatic Basin, although it is difficult to see what sorts of products – apart from raw materials - could have been offered by these areas in exchange for grain. Comparative evidence from the Black Sea coast suggests that the coastal towns often turned to the Balkan interior in times of grain shortages.[1097] It is possible that similar patterns of trade prevailed in the western Balkans, although it has to be said that the Dalmatian interior had a much lower agricultural productivity than inland Thrace. In the end, the balance seems tipped in favour of seeing these settlements as largely self-sustainable. Their small size in conjunction with the high local urbanization rates and intensive farming of the small agricultural territories would have secured the survival of these towns throughout the period of Antiquity.

Provisioning on the basis of the local agricultural resources was a problem only in the case of the major autonomous towns and legionary agglomerations. Hence these two categories must be examined separatly because, while most of the autonomous towns had to rely on their own resources and produce, the grain supply for a large segment of the population of the legionary agglomerations was the responsibility of the provincial government. There was also a considerable difference in the grain deficits. Most of the autonomous towns – with the exception of the largest port-towns and provincial capitals – merely touched the productive ceilings of their agricultural territories. In contrast, the legionary agglomerations, the so-called double towns in particular, exceeded the agricultural potential of their limited catchment areas by 200 to 300%.

The legionary agglomerations were obviously not dependent on the local agricultural resources, nor were they rooted fully in the economic system of the region. Their size and micro-locations were

[1096] Jongman 2007, 592-618.
[1097] Pippidi 1975, 31-55, 65-80.

determined entirely by their strategic and political importance. The cost of supplying these giants was shared between the government and the provincial communities. A number of possible mechanisms for the grain supply of the army camps – not necessarily mutually exclusive – could be resorted to by the provincial government.[1098] One possibility was that the grain for the legionary camps was imported from outside the study-region, implying that these settlements were largely independent of the provincial societies. Most of the legionary agglomerations were located on the Danube and supplying them with foodstuffs produced in the wider Mediterranean Basin should not have presented an insurmountable logistical problem for the provincial government, although it should be mentioned that the grain imports from distant regions would have been expensive even if they were intended for army consumption. A much cheaper alternative would have been to purchase or requisition the grain provisions from the surplus-producing areas in the interior of the provinces.[1099] Many of the civilian towns and areas under military supervision had the potential to produce sizeable surpluses that could have covered at least a portion of the grain demand of the military. If this mechanism was ever put into practice, it would have resulted in much stronger economic ties between the military and civilian sectors than the first scenario would allow. Obviously much depends on the modalities of these transactions. If the grain was purchased privately, it would have opened the local landowning elites wonderful opportunities to make a profit. Conversely, if it was requisitioned, it would have been a severe drain on the provincial economies.[1100] One final possibility is that most of the grain demand of the legionary agglomerations was met by the agricultural produce of the territories of the civilian towns that emerged on the edge of the *prata legionis* or from parts of the *canabae*. The population of these towns was not more than 50% of the total population sustainable by the resources available within their catchments and they were in control of large and fertile administrative territories.

The largest among the civilian towns – Dyrrhachium, Salona and Poetovio – had grain deficits comparable to those showed by the legionary agglomerations. These towns were not entitled to the special subsidies from the provincial government, but able to fall back on their privileged status and role in the regional settlement system, they could rely on other channels for their food-supply. One possibility was that they procured a proportion of their grain on the open market. Both Dyrrhachium and Salona were major gateway communities on the Adriatic coast, trading hubs through which natural resources and raw-materials were siphoned off from the Balkan interior and finished goods were imported.[1101] If this were so, the elites based in these towns would have had access to the agricultural produce of areas much larger than their immediate hinterlands. The problem is that there is very little positive evidence of the existence of large manufacturing sectors in either Dyrrhachium or Salona. By virtue of their locations, it is feasible to assume that these towns were primarily middlemen and also perhaps service centres, but there is nothing in the archaeological and written record to suggest that these were great manufacturing centres.[1102] Poetovio shows somewhat better evidence of being a major centre for production, but this town was disadvantaged by its land-locked position.[1103] Although located on the very busy thoroughfare of the Amber Road, the transportation of bulky products from the Adriatic ports would have been too expensive. A likelier scenario is that

[1098] Roth 1999; Erdkamp ed. 2002; Stallibrass, Thomas eds. 2008.
[1099] Herz 2002, 19-46.
[1100] *Cf*. Mattingly 2006.
[1101] Cabanes, Drini eds. 1995; Santoro 2008; Cambi ed. 1991.
[1102] Marin 2002, 9-23; argues that Salona was the main centre for the quarrying and dressing of stone on the central Dalmatian coast.
[1103] Horvat *et al*. 2003, 153-189.

the grain for these communities came from a source much nearer home. All three towns were autonomous communities that governed territories extending over couple of thousand square kilometres. These territories were many times the size of the immediate urban hinterlands and included large fertile sections some of whose produce would have ended up in the central administrative centre in the form of rents and taxes or offered on sale at the market. In cases when the administrative territories were limited or included agriculturally marginal areas - Salona - the wealthy landowners could have always purchased extra land in the territories of neighbouring towns or invested in farming in the governmental districts (see below).

The local urbanization rates in most of the large civilian towns – larger than 30-40 ha - were high, ranging between 30 and 50%. This agrees with the small corpus of archaeological evidence so far obtained for the settlement patterns in the hinterlands of the Balkan towns. In most of the urban territories that have been studied by modern survey techniques or have had a long-standing history of research, the predominant settlement form is the isolated villa or farm.[1104] This is especially prominent in the areas enclosed by the market radius, in which major agglomerated settlements are rare. A villa-landscape does not necessarily mean that there are no agglomerated settlements at all, but these are usually tiny hamlets attached to the largest of the *villae*.[1105] The predominant pattern of settlement in the urban territories is first and foremost a reflection of the local agrarian relations. Most of the land in the surroundings of the towns was owned by the urban-based elites who had the capital wherewithal to make large investments in their rural estates. However, this dispersed pattern is also an important pointer to moderate population levels in the urban hinterlands. Rather than by taxing communities of small land-holders, the preferred method for the extraction of resources from the countryside was direct exploitation using either hired labour or tenant farmers. Unsurprisingly, the Early Roman village in the Balkan provinces is as untraceable in the archaeological record as the secondary agglomerations. The majority of the farmers who worked the land in the vicinity of the urban centres must have been based in the small hamlets that accompanied the large villa-estates. The centripetal tendencies in the urban catchments – the elite dominated countryside, the concentration of services in the central place - were too strong to allow the emergence of stable agglomerated settlements.

This section opened with the argument that, even though the majority of the Roman settlements in the study-area did not enjoy an optimal relationship with their arable zones, the settlement network as a whole covered most of the agriculturally productive micro-regions. However, towns or major central places did not tend to develop in every fertile corner of the study-region. In virtually every province there were fertile or well-connected micro-regions by-passed by the urbanization process. Nevertheless, towns had evolved in many of these areas by the Late Roman period and this local urban tradition was revived in later historical periods. In some instances, these parts of the study-area had been put under military surveillance, – implying either a lack of or at most a limited autonomy – but quite often they included neither major settlements nor military outposts. In the absence of tangible evidence, it is impossible to say much about the specific factors that held the urbanization of these areas back. However, it is another story when it comes to discussing the situation in the mining

[1104] Liburnia: Chapman, Shiel, Batović eds. 1996; Aquincum: Németh 1997, 47-55; Apollonia in Illyria: Davis *et al*. 1998-2002; Istrian Peninsula: Tassaux 2011, 431-440; Carnuntum: Kandler, Humer, Zabehlicky 2004, 11-66; Ployer 2009, 1437-1447; Sarmizegetusa: Oltean 2007, Figure 5.2, 5.17; Napoca: Gudea 2009, 187-319.
[1105] Oltean 2007, 148-149.

districts, in which towns or major agglomerated settlements appeared only in a few exceptional cases and this bears looking into. Quite clearly, the legal status of this land not only precluded the emergence of fully autonomous towns, it also represented a huge disincentive for any investment in permanent residences or workshops. Of course, it is legitimate to ask if the same conditions that blocked the urbanization of the mining districts were also not at work in the non-urban parts of our study-region that were not blessed with valuable mineral resources. One crucial point is certain in any explanation of the situation, it is possible to exclude the environmental factors as these areas were urbanized in later historical periods.

One possible role of the non-urban zones in the regional economy is revealed in the context of the overall distribution of the urban network in the study-area. As has indisputably emerged throughout this study, the chief urban cores of the Balkan Peninsula and the Danube were located in agriculturally marginal areas – the coastal zone and the *limes* –, while many of the large and fertile valleys in the Balkan interior remained under-urbanized throughout the Principate. This unbalanced distribution of the towns and major settlements would have required a mechanism for the redistribution of the agricultural surplus on a regional level. Although impossible to prove at this moment, it stands to reason that both the non-urban segments of the region and the areas in which towns failed to achieve their full potential could have still contributed to the provisioning of the excessive military sector. Admittedly, this scenario is entirely hypothetical, but it would have been the most rational way of securing at least a proportion of the subsistence needs of the overgrown legionary towns or the centres of some of the mining districts. Taking this a step further, if both agricultural surplus and recruits for the auxiliary units were continually being extracted from these micro-regions, the absence of urbanizing tendencies becomes slightly more intelligible. The retreat of urbanism from the Danube *Limes* to the vacant interior of the provinces in Late Antiquity does seem to point in the same direction.[1106]

What proportion of our study-area formed part of the non-urban sector and how is it related to the different zones identified on the settlement map? The study of the epigraphic sources has demonstrated that the combined territories of the areas under either direct governmental control or military supervision and the areas that could not be ascribed to any of the known administrative units or belonged to non-urban *civitates* made up between 20 and 40% of the provincial territories in the western Balkan and Pannonian provinces and between 40 and 60% in the eastern Balkan provinces and Dacia. This difference becomes far more pronounced if the coastal belt and the Balkan interior are examined separately. It seems that this divergence is closely related to the variable intercity distances, rarely exceeding 30 km in the pre-Roman urban belt and in parts of the Pannonian provinces, rising to over 70 km in the belt of newly founded towns and settlements. Importantly, the governmental sector was not necessarily more extensive in the latter group of provinces. In fact, the presence of special fiscal districts in the eastern Balkan provinces is poorly attested. What has been determined of the extra-municipal sector in these provinces is largely based on negative evidence; it begins where evidence of the activity of the local government ends. Despite the vast expanses of the urban territories in continental Moesia and Thrace and in Roman Dacia, large segments of these provinces still remained outside the municipal umbrella.

[1106] *Cf*. Poulter 2002, 99-135.

Far more important than the apparent dichotomy between the eastern and western halves of the Peninsula is the coincidence between the non-urban zone and the third segment of the regional settlement map – the Balkan interior. Most of the mining districts, areas under military control and non-urban *municipia*, were located in the segment of the network that separated the coastal zone from the Danube *Limes* and in Roman Dacia. This is yet another testimony to the irregularity and variable density of the regional settlement system. Large settlement size and high urban density were pushed to the periphery of the network, even if such move meant that they could not be provisioned from the local agricultural resources. Conversely, the network was at its thinnest in the central parts of the region, despite their relative agricultural fertility compared to the coastal or frontier zone. To test our hypothetical model for a regional economy in which natural resources and labour were channelled from the centre to the periphery, it will be of crucial importance to study the levels of productivity in these areas under the Principate.[1107] Reading through the small volume of studies that discuss this topic gives the impression that production was intensified only towards the end of the Principate and during the Late Empire. Thinking this through, it could have also been related to a change in the manner of exploitation, namely: the mounting involvement of the provincial government from the time of the Severan dynasty.[1108]

Pertinently, the size of the administrative units could also, in part at least, have been determined by exogenous factors, namely: the regional geography and the variable population density. This would explain the lack of positive correlation between settlement size and the extent of the urban territories. As pointed out, the large civilian towns required large administrative territories to meet their subsistence needs but, from a comparative perspective, these were not the largest administrative units in the area. Surprisingly enough, the higher end of the spectrum of the territorial sizes was often reserved for the units that were only nominally urbanized or could even be qualified as non-urban. Although vast in size, these territories did not abound in natural resources, either agricultural or mineral, and were sparsely populated. The principal urbanogenic forces – a wealthy landowning class and an autonomous productive sector – were too weak in these micro-regions and these same factors obviated the need for a heavy urban or administrative infrastructure. This postulation is confirmed by the few instances of territorial fissions in our study-region in the period of the High Empire and, especially, in the subsequent period. These break-ups are almost entirely confined to the colonial *agri* and were very rare among the overstretched territories of the Latin *municipia*. Once again in this matter, the divide between the civilian towns in the interior of our study-region looms: the *coloniae*, the main pillars of the urban network, and the Latin *municipia*, the secondary branches of the network, whose main function was the administration of the marginal areas.

A large territorial size was not an exclusive feature of the "small" *municipia* or the non-urban districts. Because of the low urban density in the Balkan interior, extending the administrative outreach of the towns would have been the only viable way of establishing a satisfactory degree of administrative coverage. The best example of this are the vast urban territories of Roman Thrace, in which the military sector was too narrow to have compensated for the small number of urban units. From a long-term perspective, the administrative arrangements in the Balkan and Danube provinces were by no means exceptional, although the number of administrative units was somewhat lower than in later

[1107] Mladenović 2014 in press; is an important contribution to our understanding of the volume of ore extracted from the mines in the western Balkan provinces.
[1108] Dušanić 1989, 148-156; Dušanić 1989-1990, 217-224; contra Edmondson 1989, 84-102.

time periods. What differentiated the Early Roman provinces from the later state-organized societies in this region is the distribution rather than the number of administrative units. As a consequence of the high urban density on the periphery of the network, the administrative units in the interior were many times the size of the coastal units. This is not a simple outcome of the greater intercity distances; our reconstructions of the administrative map of the study-region are also based on the distribution of the relevant epigraphic sources. The towns that governed the large districts in the Balkan interior were too far flung to have functioned as efficient market centres of their large territories. Their primary function would have been local administration and the levying of taxes. They would play hardly any role in the organization of economic life on a micro-regional level. However, this situation does not challenge the efficiency of the urban network. Its size might have been restricted, but it managed to fulfil its basic duties without causing any major changes throughout the period of the High Empire.

One of the recurrent themes in this study has been the opposition between the military-governmental and civilian sectors. It is easy to fall into the trap of thiniking that the reduced urban density in the study-region can largely be attributed to the all-pervasive presence of the army, usurping the physical space and the potential for the emergence of autonomous urban centres. This observation is not incorrect, but it fails to take account of the other side of the coin. It is not enough to underline the fact that the garrison settlements were often more receptive to the processes of urbanization than the civilian secondary agglomerations. After all, the great majority of the settlements that acquired urban status after their foundation were auxiliary *vici*. However, in order to obtain a better understanding of the settlement system in this corner of the Roman Empire, the military sector has to be re-inserted into the regional administrative and economic architecture. The military and governmental sector was not just a complement to the civilian segment of the settlement network. These two spheres actively collaborated. It was not unusual for the provincial government to offer the autonomous towns its military and financial support. A very good indication of this is the regular presence of *beneficiarii* in the urban centres or the construction of military defences in the territories of the Thracian towns.[1109] Conversely, the epigraphic evidence from the Danube *Limes* strongly indicates the involvement of the urban elites in the economic life of the frontier zone. Even if the possibility that the urban aristocracy did play any part in the food supply of the garrisoned units is denied, the army would have still represented a large and attractive market, demanding a wide range of other goods and services, besides food. In short, the civilian sector would have surely been indispensable to the normal functioning of the Danube *Limes*. Without the presence of productive and enterprising towns, maintaining the long frontier zone would have overloaded the resources of the Empire. At this point, the fact that the rank-size graphs of the frontier provinces also hint at a closer integration between the military and civilian towns should be underlined.

The economic interest of the urban elites was not focused solely on the Danube *Limes*. Despite the presence of large army contingents in the region, the provincial government simply did not have the capacity to assume full responsibility for the exploitation of the sizeable extra-municipal sector. The major civilian towns in the Balkan interior played a key role in the operation of the mining districts, providing the capital necessary for the extraction and processing of the ore. Legal documents have revealed that the urban aristocracy was still being expected to perform this role as late as the fourth

[1109] Gerov 1980, 273-283; Ott 1995.

century AD.[1110] The partnership between the provincial government and the urban elites remained one of the main principles on which Rome based its administrative and economic control of the region. The involvement of the urban aristocracy in the mining districts is well-attested in the rather poor epigraphic record from these areas. It is important to stress that the names of only a few chosen towns are mentioned. These are almost exclusively the settlements that belonged to the first or second tier of the settlement hierarchies, often coinciding with the earliest Roman colonies in the Balkan interior, founded soon after the establishment of the Danube *Limes*. Unlike the typical *municipia*, these towns were the main economic bases of the Empire in the regions behind the *limes*. Their sphere of economic interest was not limited to the mining districts and the frontier zone. Members of their *curiae* are also represented in the epigraphy of areas that have been associated with the imperial treasury and in the territories of the smaller towns. Their appearance in areas located hundreds of kilometres away from the territories of towns in which they were domiciled is most readily explained by their role as contractors or, in cases in which they appear in the territories of smaller towns, as local landowners and benefactors. These are the only towns in the study-region whose economic outreach went beyond the limits of their administrative territories. We believe that this was one of the principal factors behind the differential growth of the autonomous towns. Privileged access to capital and resources was reserved for the autonomous communities of Roman citizens. The centres of the peregrine communities, even after they had been granted municipal charters, would have been of little importance outside their administrative territories.

The most tangible threads that kept the settlement system of our study-region together were those linking the frontier zone to the major civilian towns and the latter to the non-urban segments of the network. We suspect that certain sectors – the frontier zone or the large port-towns on the Adriatic littoral – maintained a closer relationship with Rome and Italy than to the Balkan interior. Despite the fact that this claim is unsupported by concrete evidence, it is implied in many aspects of the urban geography of the Balkan Peninsula and the Danube. It is only because of their position in relation to Rome and Italy that some of Adriatic towns were larger than the towns from the Balkan interior, whereas the principal basis for the large size of the legionary agglomerations, and the military sector in general, was its importance to the security and the political stability of the Empire. The fact that the towns whose existence was fully rooted in the regional demographic and economic currents and that were the principal binding element between the coastal zone and the Danube frontier lagged behind the towns in the latter areas in terms of size and importance is an extremely good indicator of the exploitative nature of the system. The framework of the settlement system consisted of a set of vertical relationships between the frontier and civilian settlements and the civilian settlements and secondary agglomerations. These relationships were mediated chiefly by the central and provincial government. Almost nothing is known about the intensity of trade relations between the individual towns and sub-units of the region, but it has emerged that, theoretically, there was not much incentive for regular economic interactions on a regional level. Notwithstanding the paucity of research on this subject, there is no evidence of structural horizontal links between the Balkan towns and settlements. Until proven otherwise, the possibility that the average Balkan town was an inward looking, micro-regional centre will have to be borne in mind.

It is striking that the only effective sinews of the settlement system were essentially the same relationships that connected Rome to its tributary kingdoms in the region at the time of the Late

[1110] *Cod*. *Theod*. I 32, 5; Dušanić 1989, 149.

Republic. The newly established network of towns and settlements in the Balkan provinces was intended to replace the web of tributary kingdoms and tribal alliances that preceded the Roman conquest. Although formally incorporated into the Roman Empire, no significant changes were made to the role of this region in the political economy of the Empire. It was a functional system of administrative and economic control that endured over a long period of time. Major changes arrived only at the dawn of Late Antiquity and, rather than being a conscious effort to reform, they were initiated by the global shifts in the political and economic map of the Roman Empire: the emergence of the new capital on the Bosporus, the decline in the Trans-Adriatic relations and the radical transformations in the defensive system of the Late Empire.