ORGANIZING ECONOMIC GROWTH: ROMANIA AND TRANSYLVANIA ON THE EVE OF THE GREAT WAR

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ORGANIZAREA CREȘTERII ECONOMICE: ROMÂNIA ȘI TRANSILVANIA ÎN AJUNUL MARELUI RĂZBOI

ABSTRACT: *How big was the economic gap between the Old Romanian Kingdom and Transylvania on the eve of the Great War and how did Transylvania and other Habsburg lands rank in the economy of the Austro-Hungarian Empire? This paper makes three related claims in this regard. First, while the gap between old Romania and Transylvania appears to be rather small according to older datasets, revised long series data published more recently by Maddison and the Romanian central bank show a gap that in 2019 per capita GDP would look like the gap between Romania and Italy. If these newer datasets built with up-to-date methodologies are correct, then the conclusion is that between December 1, 1918 and the Trianon Treaty of 1920 Romania received territories that were much better situated economically and whose growth trajectory before the Great War showed a strong convergence with Italy and Spain. While the gap between Romania and Hungary endured for most of the 20th century, for some time during state socialism after joining the EU the gap between Romania and Hungary's GDP per capita as a share of the European average shrunk considerably, pointing at dynamics of convergence that reflect on both slower growth Hungary and stronger growth in Romania. Second, while Transylvania was at the bottom of the ranking of regions of Austro-Hungary, its gap with imperial Hungary in terms of per capita GDP was not extremely large (13 percent) and Transylvania was one of the fastest growing regions of the Empire. Third, while the gap with the Austrian average was significant, it was not dramatic and there was strong convergence with the Austrian "core" thanks to Transylvania being part of the more dynamic Hungarian economy of the turn of the century. Indeed, the paper challenges the folk*

REZUMAT: *Cât de mare era decalajul economic dintre Vechiul Regat Român și Transilvania în ajunul Marelui Război și cum s-au clasat Transilvania și alte țări habsburgice în economia Imperiului Austro-Ungar? Acest articol face trei afirmații conexe în acest sens. În primul rând, în timp ce diferența dintre vechea Românie și Transilvania pare să fie destul de mică în conformitate cu seturile de date mai vechi, datele revizuite din seria lungă publicate mai recent de Maddison și Banca Națională a României arată un decalaj la nivel de PIB pe cap de locuitor care, la nivelul anului 2019, ar arăta ca diferența dintre România și Italia. Dacă aceste seturi de date mai noi construite cu metodologii actualizate sunt corecte, atunci concluzia este că între 1 decembrie 1918 și Tratatul Trianon din 1920 România a primit teritorii care erau mult mai bine situate economic și a căror traiectorie de creștere înainte de Marele Război a arătat o convergență puternică cu Italia și Spania. În timp ce decalajul dintre România și Ungaria a rezistat în cea mai mare parte a secolului al XX-lea, inclusiv în timpul socialismului de stat, după aderarea la UE, decalajul dintre PIB-ul pe cap de locuitor al României și Ungariei, ca pondere a mediei europene, s-a redus considerabil, indicând dinamica convergenței care reflectă creșterea mai lentă a Ungariei și creșterea mai puternică în România. În al doilea rând, în timp ce Transilvania se afla în partea de jos a clasamentului regiunilor Austro-Ungariei, decalajul său față de Ungaria imperială în ceea ce privește PIB-ul pe cap de locuitor nu era extrem de mare (13%), Transilvania fiind una dintre regiunile cu cea mai rapidă creștere a Imperiului. În al treilea rând, în timp ce decalajul cu media austriacă a fost semnificativ, nu a fost dramatic și a existat o puternică convergență cu „nucleul" austriac, datorită faptului că Transilvania făcea parte din*

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theory that Vienna was a better economic manager of its peripheries than Budapest by showing that Bukowina and all the other peripheral regions ruled by Vienna had much lower growth rates than Transylvania and Hungary did. Indeed, it is in the Austrian provinces that the pessimism of the internal colonialism thesis applies better in GDP per capita terms.

KEYWORDS: *Transylvania, gap, economy, statistics, post-imperialism*

economia maghiară mai dinamică la începutul secolului al XX-lea. Într-adevăr, lucrarea contestă teoria populară conform căreia Viena era un manager economic mai bun al periferiilor sale decât Budapesta, arătând că Bucovina și toate celelalte regiuni periferice guvernate de Viena au avut rate de creștere mult mai mici decât au avut Transilvania și Ungaria. Într-adevăr, în provinciile austriece pesimismul tezei colonialismului intern se aplică mai bine în termeni de PIB pe cap de locuitor.

CUVINTE CHEIE: *Transilvania, decalaj, economie, statistică, post-imperialism*

REVISITING AUSTRIA-HUNGARY

The centennial of the union between Transylvania and the Romanian Kingdom in 1918 took place against the background of much anxiety about the accomplishments of a century of these two parts of the European periphery cohabiting under the same sovereign roof. Recent scholarly work[1] and statistical excurses published on the eve of the centennial[2] had already debunked long-entrenched illusions about the country's socio-economic past and highlighted the mediocre economic performance of modern Romania during the 19th and early 20th centuries. The importance of the union and the fact that the old Romanian Kingdom's economy was extensively enriched by the addition of Austro-Hungarian territories were not lost on these accounts. However, they did not undertake a systematic comparison of the exact size of the socio-economic gaps between the two old Romanian Kingdom and the former Habsburg lands. This paper aims to fill in this gap with a first descriptive cut into the matter.

The paper also addresses an older literature on the capitalist transformation of Transylvania as "internal colonialism," a form of economic governance whereby dominant groups in the core superimpose their economic interests over and acquire fortuitous advantages from the periphery via discriminatory stratification systems. For Verdery, in Transylvania:

> "By the late 19th century we clearly have most of the characteristics of internal colonialism that Hechter lists: complete political integration and high administrative integration, external determination of prices and terms of labor, high monopoly of commercial prospects and capital investment by non-indigenes, careful manipulation of trade and licensing regulation and tariffs to undercut Transylvanian manufactures competitive with outside interests; high exports of primary products and lack of social services"[3].

Verdery carefully specifies that internal colonialism did not translate into neat ethnic outcomes and suggests that it benefited some local subordinate groups (the price of rural labor was raised by industrial investment as well as by public works). But overall, if her thesis would lead one to expect sluggish economic growth in Transylvania relative to the center of power in Budapest. At any rate, given the data limitations of the late 1970s, Verdery could not have estimated the actual output effects of internal colonialism (the matter is not addressed in her 1983 book for the same technical reason). Today, the methodological breakthroughs made in the 1990s and 2000s[4] enable us to carry out this estimation work. This paper aims to do precisely that among others.

This short statistical excursus matters not only for bringing a more comparative perspective in the state of the art specific to Romanian economic history. Indeed, it also aims to address various

1 Ban 2014; Murgescu 2010
2 Axenciuc and Georgescu 2017; Axenciuc 2018; Voinea et al 2018.
3 Verdery 1979, p. 390.
4 e.g. Good 1994; Good and Ma 1999; Schultze 2007.

unstated assumptions made in outside academia about this neglected issue. One can, for example, note the implicit assumption in public debates that before 1918 Transylvania had a far superior ("European") socio-economic situation when compared to the Romanian Kingdom, an assumption strengthened by the state of urbanization in Transylvania before 1914 or the extremely brutal facets of the latifundia system in the old Romanian Kingdom that climaxed in the massacres of 1907. One also often encounters the bolder folk assumption that since Transylvania belonged to one of the core states of European economic modernity while the Romanian Kingdom was a recently decolonized territory of the Ottoman Empire, a decaying rural periphery of that modernity, on the eve of WW1 Transylvania was essentially a Western economy, a "Switzerland of the East" as the folk trope goes.

Unfortunately while there is a very rich literature on Romanian and Transylvanian economic history before 1918 and shortly afterwards,[5] such assumptions cannot be explicitly tested because there is little and multi historical work on the political economy of capitalist development on the two sides of the Carpathians. This paper then also aims to fill in this gap in public discourse by examining key markers of economic development using newly available statistical data as well as secondary literature relevant for what Eric Hobsbawm (2010) termed the "age of empire"[6] (1875–1914).

The main argument of the paper is that using older datasets leads one to find on average a small to medium gap in GDP per capita between Transylvania and the old Romanian Kingdom on the eve of the Great War. However, contemporary datasets produced by Maddison (2020) and Voinea et al (2018) and analyzed via regional data by Schultze (2007) confirm and map out much more significant gaps between the two, with Transylvania appearing much more economically developed, at least judging in terms of GDP adjusted per capita. If these newer datasets built with up-to-date methodologies are correct, then the conclusion is that between December 1, 1918 and the Trianon Treaty of 1920 Romania received territories that were much better situated economically and whose growth trajectory before the Great War was suggestive of a strong convergence with the more developed parts of Southern Europe. Furthermore, the paper does not find evidence for the hypothesis that "internal colonialism" necessarily led to economic mediocrity in Transylvania. Indeed, it turns out that the difference between Transylvania and the Hungarian average economy was not dramatic and that it was only the regions ruled by Vienna that performed in line with the internal colonialism thesis. Of course, the findings should be interpreted carefully, as they hinge on shifts in the economic methodology employed to calculate historical GDP figures. Finally, GDP per capita is ultimately a crude measure of economic development and more comprehensive analyses should factor in a wide array of social and economic statistics.

The paper is organized as follows: the first part undertakes GDP per capita analyses comparing Transylvania with other parts of the Empire and the old Romanian Kingdom using different datasets. Next, the paper delves into social development aspects with a quick statistical look at educational and health data. The final section concludes.

METHODOLOGY

The Maddison 2020 data was criticized internally by Jutta Bolt and Jan Luiten van Zanden.[7] In a methodological note, Maddison himself acknowledged this and inserted the following caveat:

> "We now offer a new 2020 update of the Maddison Project database, which uses a different methodology compared to the 2018 update. The approach of the 2018 update is identical to that of Penn World Tables,

[5] see Verdery 1979; 1983; Hunyadi 2004; Murgescu 2010; Nagy 2011; Schultze and Wolf 2012; Kurti 2014; Rigo 2017; Kofman 2019; Axenciuc and Georgescu 2017; Axenciuc 2018 for data and overviews of the relevant work.

[6] Hobsbawm 2010.

[7] https://www.rug.nl/ggdc/historicaldevelopment/maddison/publications/wp15.pdf

> and consistent with recent economic and statistical research in this field. However, applying this approach systematically results in historical outcomes that are not consistent with current insights by economic historians."[8]

Based on these reservations, I sought alternative data using different GDP per capita calculations. First, I calibrated the Maddison data with the GDP per capita figures for Romania produced by Voinea et al (2019) at the Romanian central bank. The Maddison Project does not have sub-national data but fortunately historians[9] have calculated that for Austria-Hungary using a variety of proxies so we can tell how well did the parts of Austria-Hungary that became part the Romanian state in 1918. The proxy approach is useful because it allows estimates of subnational/regional income levels where standard national income measures cannot be computed for lack of essential data. For example, regional GDP is calculated as a function of sectoral wages and sectoral employment, calibrated by data from income tax returns to account for the non-wage income component of GDP. Schultze, for example, calculates regional GDPs by estimating regional shares in sectoral output in farming, manufacturing trade etc. at the national level and then aggregating across sectors (or industry branches) for each region.[10]

These proxies yield different dollar terms for GDP per capita and none of the regional data on Austria-Hungary contains references to Romanian GDP per capita. Thus, Schultze uses 1990 G-K international dollars, while Maddison 2020, who has Romanian data, uses 2011 US dollars. This presents problems of comparability. To overcome this problem, I calculated relative positions using a fixed reference point (Hungarian GDP per capita in the regional data for the Austro-Hungarian Empire) and then applied those percentages to the Maddison country data. This calculus can enable one to estimate the GDP per capita in the Romanian Kingdom in 1910–1912 relative to the Austro-Hungarian territories that became part of Romania as a result of the events that took place between 1918 and 1920. Another strategy was to use Maddison's data expressed in 1990 G-K dollars.

CONTEXT: AUSTRIA-HUNGARY AS A LATE DEVELOPER

If terms of a composite index of convergence during the industrial era, overall Austria-Hungary lagged behind countries with whom it shared a similar profile on the eve of the industrial revolution (France and Germany). Figure 1 below shows this very clearly, albeit with the caveat that the Empire managed to avert the fate of Russia's extremely poor performance. Much of this sluggish performance marked by spurts has a Gerschenkronian reason behind it: the uneven pace of industrialization.[11] For broader context, Bairoch (1982) estimated that between 1830 and 1913, world manufacturing output increased by a factor of 5 but in Austria-Hungary and Spain that number was half. Famously, Gerschenkron argued that in Austria-Hungary on the eve of the industrial revolution

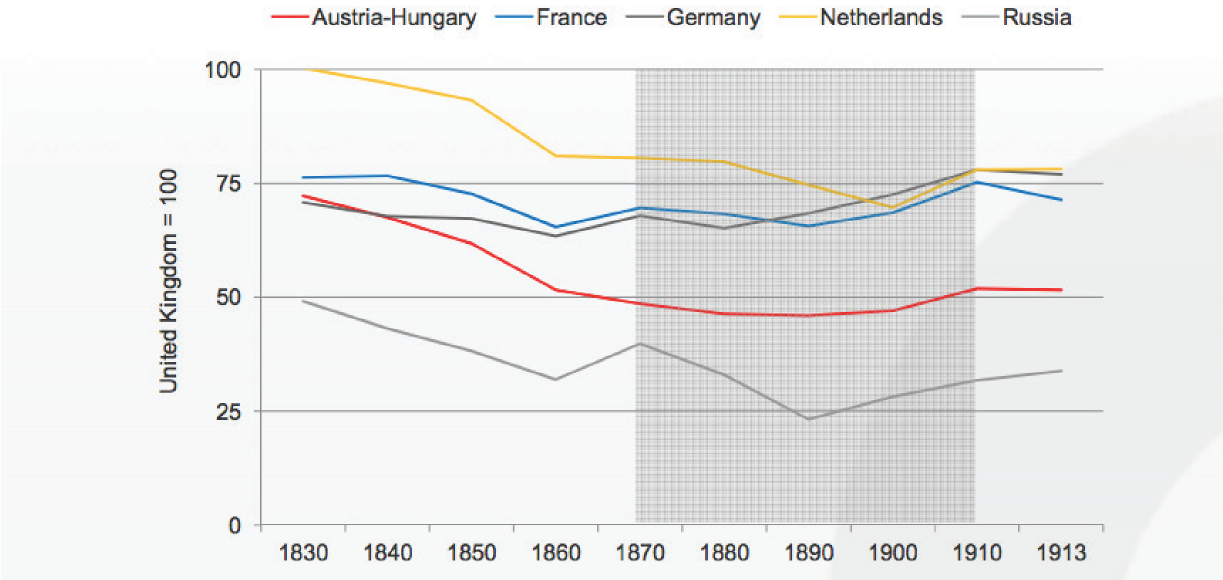
> "economic progress began to be viewed with great suspicion and the railroads came to be regarded, not as welcome carriers of goods and persons, but as carriers of the dreaded revolution. Then, the State clearly became an obstacle to the economic development of the country."[12]

John Komlos (1981) also showed that the industrial revolution in Austria began at about the same time as in Britain, yet the rate of industrialization's spread was much slower by the late nineteenth century. Yet subsequent work nuanced this view. The North-Western parts of the Empire (roughly contemporary

8 https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database–2020?lang=en
9 Good 1994; Good and Ma 1998; Schultze 2007.
10 Schultze 2007, pp. 4–6.
11 Gerchenkron 2015.
12 Gerschenkron 1970 apud. Acemoglu and Robinson 2002.

Austria and the Czech Republic) had West European-style industrialization experiences for much of the 19th century, an economic experience that ended rather abruptly into a prolonged stagnation in the 1870s and the 1880s that was trigged by the brutal financial crisis of 1873. That said, as early as 1870, many parts of the Empire had GDP per capita similar to that of Germany, France or Denmark.[13]

Figure 1: Economic convergence relative to the UK (=100)



Source: Stöllinger 2016

Yet the importance of industrialization in output growth may be overstated. Some of the most spectacular growth stories were based around cattle (Argentina), fishing (Iceland, Norway) and timber (Finland). Austria is no exception, with its per capita GDP growth equivalent to that achieved in advanced economies such as Britain and Belgium, which had per capita incomes about twice the level of imperial Austria, albeit below that of other European countries with roughly comparable levels of per capita GDP in 1870 (Italy, Norway, Spain). In contrast, Hungary grew at a much faster rate that placed it slightly the middle of the European growth performance during the belle epoque/age of empire. Even so, the most advanced part of the Habsburg Empire failed to keep pace with the expansion achieved in countries with similar GDP per capita in 1870 (Denmark, France and Germany).[14] This was reflected in the level of railway infrastructure, whose density in the Empire by 1910 was half the French levels and nearly a fourth of German levels.[15]

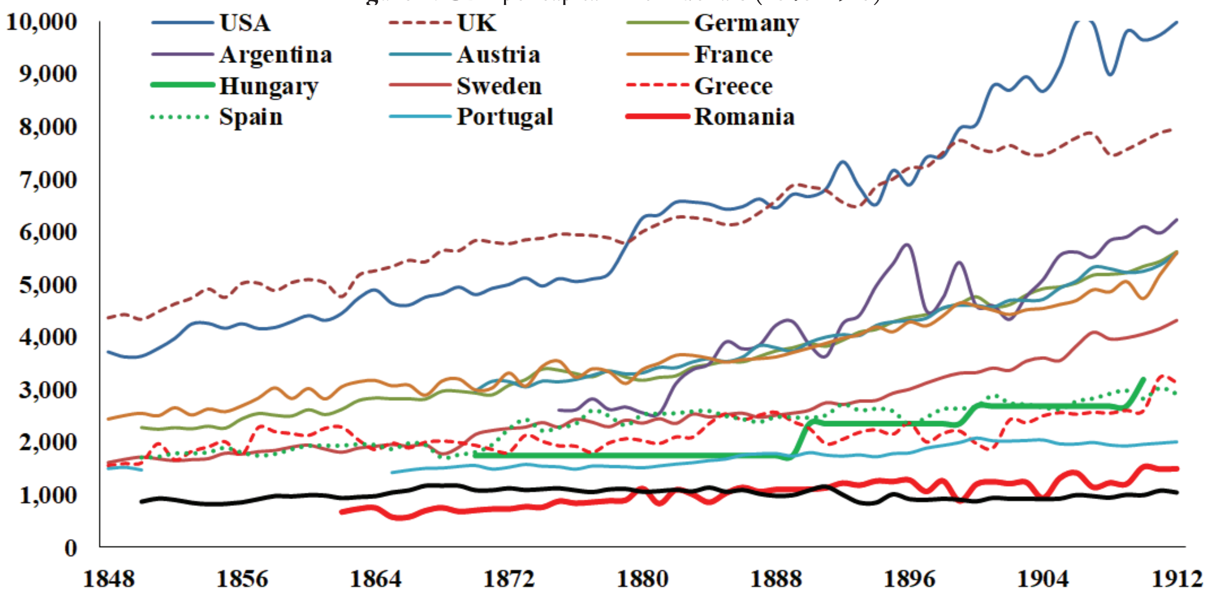
How did this translate in income terms? Doing international comparison of GDP per capita is tricky and, in this analysis, I tried to mitigate that risk by looking at different estimates made by different authors. The picture below uses data from the 2020 version of Maddison Project shows that if we express GDP per inhabitant in 2011 dollars, in 1910 the Hungarian half of the Empire (3,188 dollars) was not far removed from a core economy like France (4,726) yet was barely a third of the star core performer, the United States (9,637). In the same year, Romanian GDP per capita was 784 dollars, that is more than four times smaller than Hungary's.[16]

The 2018 version of the Maddison data offers a less stark, but still yawning gap. Figure 2 shows that Romania had come a long way since its extremely destitute peripheral status of 1859 and got to do better

13 Schultze 2000; Judson 2016.
14 Schultze 2000, p. 323.
15 Caruana-Galizia and Martí-Henneberg 2013, p. 180.
16 https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database–2020

than Brazil, a wealthier place in 1859. Yet its per capita GDP in 2011 dollars (1,527) was 38 percent of Hungary's (4,878). Indeed, if Hungary's GDP in 1910 was 72 percent of German GDP, Romania's was 22 percent. In short, on the eve of WW1, Romania was a clear case of very low-income peripheral development, much like Turkey or Brazil (black line), while Hungary rose to be on the upper end of semi-peripheral income, together with Spain. Hungary started from a similar income point in the 1860s with Greece and Spain, yet its subsequent performance was remarkable, rising above Mediterranean Europe, albeit less impressive than Sweden's rise over the same period from a similar position with Hungary in 1870. All along, Austria was close to the rich core, in the same league as France. But as the section below shows, this data clashes with earlier datasets where the gap between Romania and Hungary appears to be smaller.

Figure 2: GDP per capita in 2011 dollars (1848–1910)



Romania and Transylvania on the eve of the Great War: The first generation of GDP per capita estimates

The Bairoch data (1997) (see table 2) adjusted as a share of average European GDP (=1) shows a significant gap between the old Romanian Kingdom in 1913 (0.67) and Austria Hungary (0.93). Given that Transylvania's GDP per capita ranged between 0.67 and 0.73 of the average for Austria-Hungary, the gap between Transylvania and Romania relative to the European average remains significant (0.67 for Romania versus 0.78 for Transylvania). Expressed in contemporary terms GDP per capita PPS) relative to the EU–27 average, the distance between the Romanian economy in 1913 and the European average was comparable to the gap between Greece (0.68) and the EU–27 average in 2019 while for Transylvania the contemporary equivalent would be Portugal's share of the EU average (0.79).

Table 2: GDP per capita as a share of European average

	1870	1890	1900	1913
Old Romania	0.64	0.66	0.65	0.67
Austria-Hungary	0.89	0.92	0.91	0.93

Source: Bairoch (1997)

Next, I looked at the Broadberry and Klein (2011) data based on 1990 dollars is summarized in table 3. These authors find less dramatic gaps in 1913, with the Austro-Hungarian average slightly below Sweden's, well below France's and slightly above Norway and Finland. In this comparison, Romania's GDP per capita (1,705) is 66 percent of the Austro-Hungarian average (2,576), exactly as the gap between Romania and Portugal in 2007 using GDP PPP from Eurostat. The Schultze regional data reveals that Transylvania had 73 percent of the Austro-Hungarian average in 1910, thus making it wealthier than Romania in relative terms but by a much lower margin (1,705 for Romania and 1,932 for Transylvania, a 12 percent gap) than in the Maddison and Voinea data.

Table 3: GDP per capita in 1990 dollars

Country & region	**1870**	**1890**	**1913**
Belgium	2,722	3,443	4,263
Denmark	1,929	2,428	3,768
Netherlands	1,290	1,503	2,288
Norway	2,417	2,786	3,539
Sweden	1,370	1,714	2,454
United Kingdom	1,247	1,500	2,806
Northwestern Europe	**3,328**	**4,055**	**5,030**
France	1,746	2,212	4,406
Greece	986	1,009	1,455
Italy	1,838	2,007	2,721
Portugal	1,023	1,165	1,257
Spain	1,189	1,634	2,057
Turkey	952		1,407
Southern Europe	**1,545**		**2,534**
Austria-Hungary	*1,584*	*1,922*	*2,576*
Bulgaria	809	1,087	1,450
Germany	2,006	2,767	4,181
Transylvania *Romania*	 *1,143*	 *1,395*	***1,992*** ***1,705***
Russia	1,097	944	1,551
Serbia	599	843	1,060
Switzerland	2,098	3,183	4,270
Central & Eastern Europe	**1,437**	**1,589**	**2,322**
Total Europe	**1,686**		**2,677**
USA	2,454	3,392	5,301
Europe/USA (%) σ (N = 20)	68.7 0.432		50.5 0.471

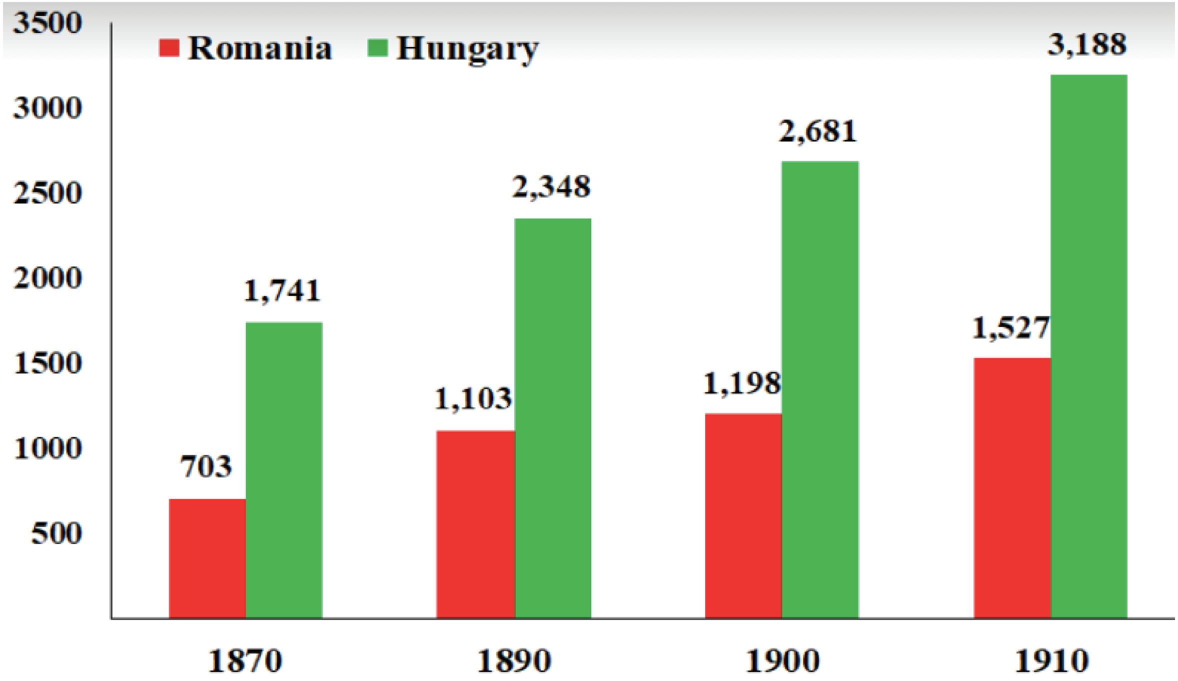
Source: Broadberry and Klein (2011).

Finally, in 2003 Angus Maddison came up with a new dataset using G-K 1990 dollars. Table 4 shows that if we look at the last year of peace as a reference (1913) Romania had a GDP per capita of 1,741 dollars, Hungary 2,098. If we apply the Schultze ratios (Transylvania was 87 percent of the Hungarian average), Transylvania's GDP per capita is 1,825, leaving a very small gap of 5 percent between Romania and Transylvania. But as the next sections show, the gaps are much larger in newer estimates.

REVISITING THE TRANSYLVANIA-ROMANIA GAP WITH NEW DATA

The Voinea at al (1918) data using the same 2011 dollars used by Maddison for 1910 yielded 1,527 dollars GDP per capita in Romania, that is half of Hungary's GDP per capita for that year (3,188 dollars at 2011 prices). Figure 3 shows that between 1870 and 1910 Romania struggled to close the income gap with Hungary (figure 3). Later, when Romania united with Transylvania (87 percent of Hungary's GDP per capita) in 1918, both countries had economies were battered by war. Romania's economy was nevertheless much more devastated by war than Hungary's (Transylvania's metropolitan center), having lost 31 percent of GDP according to Maddison and 41.9% according to the Voinea et al. In contrast, Hungary lost 18.8 percent. If 1910 is a reliable benchmark for peacetime economic comparisons, then the second pattern that emerges from the data is that in 1918 the Romanian Kingdom took over a much more developed territory, at least according to this GDP per capita data produced over the past few years.

Figure 3: GDP per capita in Romania and Hungary



Source: Author's calculations using Maddison (2020) for Hungary and Voinea et al (2018) for Romania.

Based on the synthesis of the Voinea et al's data (2018) for Romania, Maddison's (2020) data for Hungary and Schultze's (2007) data for Austro-Hungary's regions, Romania's GDP per capita in 1910 (1,527 in 2011 US dollars) was 55.7 percent of Transylvanian GDP per capita in the same year (86 % of the Hungarian GDP of 3,188=2,741). In the contemporary GDP PPS terms used by Eurostat, this percentage difference is roughly the same as that between Romania in Belgium in 2011.[17] This is a striking difference, indeed. However, even if we replace the Maddison 2011 dollars measure for GDP per capita and use instead 1990 dollars in a back to back comparison of GDP per capita expressed in 1990 dollars by both Schulze (2007) for Austria-Hungary and Voinea et al (2019) for Romania, the difference between Romania and Transylvania remains quite large (Romania was 71 percent of Transylvanian GDP per capita) although its magnitude of the gap is seriously diminished to the difference in 2019 GDP PPP terms between Romania and Italy.

After the war, the comparison between Greater Romania's GDP per capita (as reported by Voinea et al, 2019) and interwar Hungary (as reported by Maddison, 2020) paints a more complicated figure: Romania grew stronger at first but while Hungary recovered from the Great Depression Romania did not. Thus, Romania had strong growth during the 1920s (GDP per capita grew by 54 percent between 1919 and 1929, compared to 41.2 percent in Hungary) yet came to an abrupt halt in 1929, with GDP actually contracting between 1929 and 1939 by 0.07 percent. In contrast, during the same 1929–1939 period Hungarian GDP per capita experienced a 66 percent increase in Hungary. The war was comparably devastating for these Axis members: Romanian GDP per capita to lose 46.1 percent between 1940 and 1945 and Hungary lost 34 percent. All of this did not have strong path-dependent effects in the long term. Today, the gap between these countries and the EU average GDP per capita in PPP terms very small (69 percent of the EU average for Romania and 73 for Hungary), while the gap in euros unadjusted

[17] Romania (69) Belgium (117) https://ec.europa.eu/eurostat/databrowser/view/tec00114/default/table?lang=en

by purchase power remains significant (Romania's 9,120 euros in GDP per capita PPP in 2019 were 68.7 percent of Hungary's 13,260).

The gap remains large in the Maddison data for the interwar years and well until 1950 (table 4), although Hungarian growth in the 1930s is much smaller. What is particularly striking in the Maddison (2003) data is that on the eve of communism, Romania's GDP per capita was close to Albania and had shrunk to 47 percent of Hungarian GDP (compare to it being 82 % of Hungarian GDP in 1913).

Table 4: GDP per capita 1990 G-K dollars

Country	*1913*	*1928*	*1938*	*1950*
Albania	811	926	?	1,001
Bulgaria	1,534	1,219	1,595	1,651
Czechoslovakia	2,096	2,977	2,882	3,501
Hungary	2,098	2,415	2,655	2,480
Poland	1,739	2,117	2,182	2,447
Romania	1,741	1,225	1,242	1,182
Yugoslavia	1,057	1,314	1,356	1,551

Source: Angus Maddison, *The World Economy: Historical Statistics* (Paris: Development Centre of the OECD, 2003) 100–101.

Internal colonialism and GDP per capita: Transylvania's position in the economy of Austria-Hungary

The tables below show that, indeed, as much of the literature established, Austria-Hungary was highly uneven in terms of economic development, with the richest region (Lower Austria) more than three times wealthier than the poorest (Dalmatia). As established, Transylvania, Banat and Bukowina were amongst the poorer, predominantly rural ones, in contrast to some of the areas inherited by other successor states such as Czechoslovakia (Bohemia) or Poland (Silesia), whose income levels were close to the richest parts of Austria. But how much poorer was Transylvania and Bukowina relative to the Austrian and Hungarian average and how did they compare to the Romanian average?

The answer to these questions varies with the data sources yet overall it shows several patterns. First, table 3 based on the Schultze data (which is not far off from the previous Good and Ma 1998 data) shows that the gap between Transylvania and the Hungarian average GDP per capita was not wide, in contrast to the richest parts of the empire and core West European countries.

Specifically, as shown in tables 5 and 6 show, in 1910, Transylvanian GDP per capita was 86 percent of Hungarian GDP per capita. Bukowina's figure was more modest, at 69 percent. Using the 2018 Maddison Project measurements, this percentage would put Transylvania's GDP per capita in 1910 at 4,128 dollars (86 percent of 4,800). The internal imperial gaps grew wider the further West one goes: Transylvania was 73 percent of Austria but only 42.4 percent of the wealthiest Austrian region and at 58 percent of German GDP per capita and in that year.

Table 5: GDP per capita 1990 G-K dollars

	1870	**1880**	**1890**	**1900**	**1910**
Lower Austria	2578	2453	2656	3071	3343
Austria	1449	1450	1627	1858	2130
Austria-Hungary	1238	1285	1464	1627	1921
Hungary	961	1051	1240	1399	1636
Transylvania	843	933	1087	1189	1419

Galicia	858	875	1016	1010	1205
Bukowina	865	843	940	1007	1132
Dalmatia	758	834	847	867	932

Source: Schultze (2007) for Austria-Hungary

Table 6: Relative position of GDP per capita (1910)

	Percentage of Hungary	**Percentage of Empire**
Lower Austria	204	106
Austria	130	110
Austria-Hungary	**117**	**100**
Hungary	100	85
Transylvania	86	73
Galicia	73	62
Bukowina	69	58
Dalmatia	56	48

Source: author's calculations based on Schultze (2007) for Austria-Hungary

Good (1994) estimated the gap between all territories of Austria-Hungary that became part of Romania and other countries for the same 1970–1910 period. This time the unit is 1980 international dollars and as a result the figures look lower than estimates with dollars from 1990 and 2011. Again, table 7 shows that on average they are both amongst the poorer parts of the Empire but also some of the most economically dynamic as measured by the average growth rate for the period. Importantly, however, Romania received from Austria-Hungary territories that were wealthier per capita than the territories received by contemporary Croatia and Poland.

Table 7: GDP per capita in successor territories of Austria-Hungary

Successor State/Unit	**1870**	**1880**	**1890**	**1900**	**1910**	**Growth Rate**
Austria[a]	1,045	1,161	1,334	1,623	1,813	1.44
Czechoslovakia[a]	803	913	1,077	1,296	1,491	1.59
Czech Republic[a]	896	1,018	1,187	1,429	1,634	1.54
Slovakia[a]	503	572	721	866	1,030	1.85
Hungary[a]	532	661	789	1,022	1,253	2.15
Italy[b]	694	797	934	1,150	1,448	1.84
Poland[b]	420	477	575	665	763	1.53
Yugoslavia[b]	432	510	587	695	885	1.74
Slovenia[a]	584	683	785	913	1,137	1.62
Croatia[a]	377	446	506	595	786	1.76
Serbia[b]	444	528	626	764	923	1.83
Ukraine[b]	393	442	535	625	722	1.56
Romania[b]	382	480	558	650	827	1.85

Source: Good (1994: 882).
[a] Indicates that the entire teritory of the present-day state fell completely within the boundaries of the Habsburg Empire.
[b] Indicates that only part of the territory of the present-day state the boundaries of the Habsburg Empire. The GDP per capita levels and the growth rates are for the Habsburg portion only. For Greater Romania this means portions of imperial Hungary such as Tisza Left Bank, portions of Tisza-Maros, Transylvania, and from imperial Austria portions of Bukowina and portions of Galicia.

The Good (1994) data also enables a reader-friendly comparison of all territories of Austria-Hungary that became part of Romania with national European data as a share of the Swedish GDP per capita, a solid measure given that Sweden was one of Europe's most dynamic economies in the late 19th and then throughout the 20th century. Table 8 shows that in the Europe of year 1910, these territories that, as we saw, were themselves very unequal, with Bukowina on one end and Transylvania at the other end, were, at 48 percent of the Swedish GDP per capita of the time, wealthier than the economies of Portugal and Greece, but quite far from other late developers such as Spain, Italy or Finland.

Table 8: GDP per capita in Europe (post–1989 boundaries; Sweden = 100)

	1870	1890	1910	Growth Rate % 1870–1910	1950	1987
Country						
NORTHWEST						
United Kingdom	207.6	207.1	166.7	1.00	107.5	89.2
Belgium	160.2	163.6	135.8	1.03	80.4	83.5
Netherlands	162.4	161.1	130.2	0.90	91.8	86.9
France	119.8	118.0	101.7	1.09	78.4	90.9
Germany	99.1	104.4	102.0	1.63	64.6	94.6
Switzerland	134.8	136.0	121.5	1.18	118.5	98.4
NORTH						
Denmark	126.1	126.6	130.2	1.55	100.5	95.4
Finland	73.0	70.5	68.1	1.40	67.5	90.4
Norway	93.8	92.8	82.5	1.11	88.7	112.4
Sweden	100.0	100.0	100.0	1.49	100.0	100.0
MEDITERRANEAN						
Italy	95.4	83.8	83.3	1.00	54.3	85.9
Greece	-	-	43.2	-	25.1	44.8
Portugal	73.3	-	46.0	030	35.0	54.9
Spain	88.9	-	85.7	1.37	43.4	61.0
CENTRAL AND EAST						
Imperial Austria	79.0	81.2	78.3	1.48	-	-
Imperial Hungary	46.9	54.5	58.8	2.00	-	-
Habsburg Empire	66.9	71.2	70.8	1.63	-	-
Austria[a]	108.9	110.8	105.4	1.44	54.8	83.0
Czechoslovakia[a]	83.7	89.4	86.7	1.59	67.0	59.3
Czech Republic[a]	90.5	98.6	95.0	1.54	-	-
Slovakia[a]	52.4	59.8	59.9	1.85	-	-
Hungary[a]	55.4	65.5	72.9	2.15	58.5	57.1
Italy[b]	72.3	77.6	84.2	1.84	-	-
Poland[b]	43.7	47.7	44.3	1.53	47.2	38.7
Yugoslavia[b]	45.0	48.8	51.4	1.74	25.0	38.9
Slovenia[a]	60.8	65.2	66.1	1.62	-	-
Croatia [a]	39.3	42.0	45.7	1.76	-	-
Serbia[b]	46.3	52.0	53.7	1.83	-	-
Ukraine[b]	41.0	44.5	42.0	1.56	-	-
Romania[b]	39.8	46.3	48.1	1.85	23.1	37.1
Russia (Soviet Union)	70.6	-	54.2	0.72	58.5	56.6

Source: Good (1994: 886).
[a] Indicates that the entire teritory of the present-day state fell completely within the boundaries of the Habsburg Empire.
[b] Indicates that only part of the territory of the present-day state the boundaries of the Habsburg Empire. The GDP per capita levels and the growth rates are for the Habsburg portion only.

Internal colonialism and growth

On the eve of the Great War Transylvania remained part of the poorer side of the Empire (it was the 18th of the 22 regions of the Dual Monarchy). At the same time, its convergence was remarkable. In terms of growth rate, table 9 shows that contrary to conventional wisdom, rule by Budapest seems to have been better than rule by Vienna because the latter had had sluggish growth by the standards of other late industrializers while imperial Hungary ranked about mid-range in the European growth comparison.[18] The reasons for superior Hungarian growth are complex but economic historians are inclined to emphasize the contrast between Vienna's erratic fiscal policy forced by addressing myriad ethic demands, particularly from the Czechs[19] and Hungary's combination of a more purposive, expansionary and a less dogged by horse-trading kind of policy (there was less need for that because Vienna was less inclined to give in to minorities' agendas than Vienna was) and luck (the expansion came following a catastrophic financial crisis in 1975 Vienna that incentivized Austrian capital to move where the state stimulated investments).[20]

Both Hungary and Transylvania outperformed Austria and the imperial average, with Transylvania closely shadowing the average Hungarian growth rate, close to the most developed Hungarian regions (Right-Bank Danube) and higher than most Hungarian regions overall. Indeed, Transylvania, Croatia-Slavonia, Silesia and the Budapest area were the fastest growing parts of the Empire by a wide margin. In other words, Verdery's internal colonialism did not keep Transylvania down. On the contrary, in the broader context of the political economy of the Empire it pulled it into the orbit of the much more dynamic Hungarian economy. In contrast, Bukovina was kept down by the lower growth rate of the Austrian half and so was Galicia, whose GDP per capita in 1870 was similar to Transylvania but which then lagged far behind Transylvania.

To better probe the reach of the internal colonialism thesis it would be ideal to have granular sectoral data for Transylvania to see which sectors (primary, secondary, tertiary) accelerated or decelerated the most over what period. For example, we know that in Hungary the largest annual growth between 1895 and 1913 was in manufacturing followed by mining and that the same was true in Austria, except that the rates of growth in these two sectors were lower in Austria.[21] If Verdery was right, then Transylvanian growth should be lower relative to Hungary in manufacturing and higher in agriculture and mining.

Table 9: Yearly growth rate 1870–1910

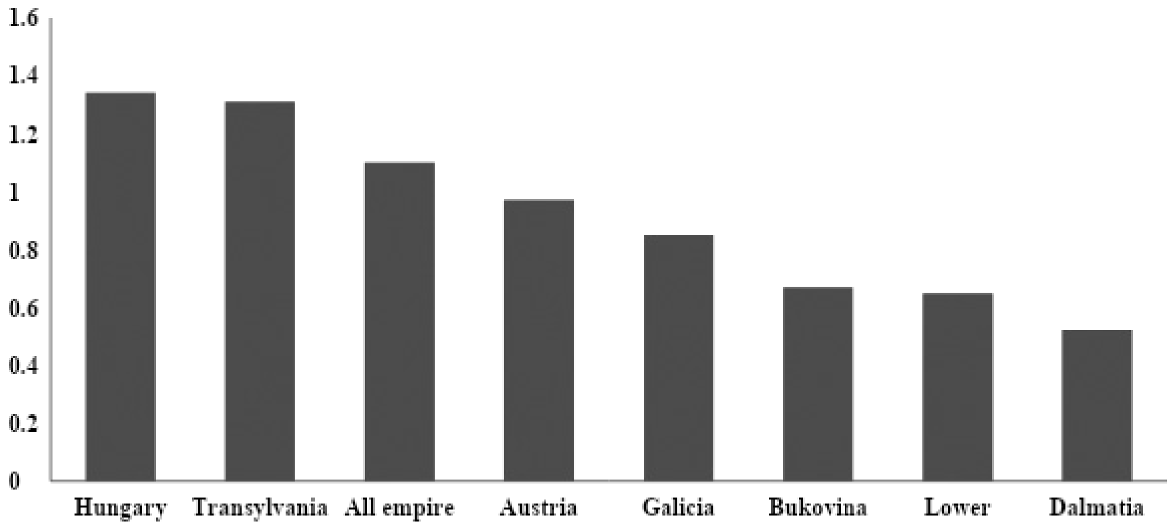
Region & country	Growth
Lower Austria	0.65%
Upper Austria	0.73%
Salzburg	0.80%
Styria	1.17%
Carinthia	1.23%
Carniola	1.29%
Littoral	1.02%
Tyrol & Vorarlberg	0.95%
Bohemia	1.10%
Moravia	1.07%
Silezia	1.32%
Galicia	0.85%
Bukovina	0.67%

18 Schultze 2000.
19 Eddie 1989.
20 Komlom 1981, pp. 147–205; Schultze 2000, pp. 324–327.
21 Schultze 2000, p. 32.

Region & country	**Growth**
Dalmatia	0.52%
Left Bank Danube	1.18%
Right Bank Danube	**1.39%**
Danube Tisza Basin	1.35%
Right Bank Tisza	1.26%
Left Bank Tisza	1.24%
Tisza Maros Basin	1.28%
Transylvania	**1.31%**
Croatia-Slovenia	1.36%
Austria	0.97%
Hungary	1.34%
Habsburg Empire	1.10%

Source: Schultze (2007).

Figure 4: Growth rates in select regions of Austria-Hungary



Source: Author's calculations based on Schultze (2007).

Adjusted output figures are indicative yet highly imperfect metrics of development as long as they are not combined with measurements of income and wealth distribution. Much work remains to be done here. The Schultze (2007) data from tax records can be combined with future work on tax records from the old Romanian Kingdom to generate comparative data on distribution. Given the high dependence on agriculture on both sides of the Carpathians, inequality of land ownership can be thrown in as a useful complement. When combined with comparative figures on infrastructure, urbanization or industrialization we could obtain a more comprehensive picture of the differences between the territorial units merged in 1918 into Greater Romania. Meanwhile, we can gauge some of the social differences expressed in terms of key health and education metrics. It is to this task that the analysis turns to in the next sections.

CONCLUSIONS

This paper makes three main contributions. First, it shows that using older datasets leads one to find on average a small to medium gap in GDP per capita between Transylvania and the old Romanian Kingdom on the eve of the Great War. However, contemporary datasets produced by Maddison (2020) and Voinea et al (2018) and analyzed via regional data by Schultze (2007) confirm and map out much more significant gaps between the two, with Transylvania appearing much more economically developed, at least judging in terms of GDP adjusted per capita. If these newer datasets built with up-to-date methodologies are correct, then the conclusion is that between December 1, 1918 and the Trianon Treaty of 1920 Romania received territories that were much better situated economically and whose growth trajectory before the Great War was suggestive of a strong convergence with the more developed parts of Southern Europe. Of course, these numbers are averages and have little to say about the enormous inequalities between the regions of Transylvania. Thus, while Southern Transylvania was economically and educationally (literacy rates were over 80 percent by the 1920s already) closer to the wealthier parts of the Empire and Western Europe in general, vast rural parts of the Transylvanian Plains (currently in Mures, Cluj, Salaj) and the Western Carpathian mountains had levels of poverty and latifundia system land concentration that made them more similar to the situation of rural areas in the Old Romanian Kingdom's great plains in Wallachia and Moldova. Such variations within Transylvania weaken the strong dualist framework entertained by some regionalists.

Second, the paper puts a wrinkle on (rather than actually challenge) the pessimism of the internal colonialism thesis advanced by Katherine Verdery when it comes to output growth. Certainly, Transylvania was part of the less developed parts of the Empire. But it is also true that rather than Dualism being bent to lead to economic mediocrity in Transylvania, it turns out that the difference between Transylvania and the Hungarian average was far from being dramatic and, indeed, their growth rates were roughly similar, with few Hungarian regions growing as fast as Transylvania did in the 1870–1910 period. Similarly, while the gap with the Austrian average was significant, it was not dramatic and there was strong convergence with Austria largely thanks to Transylvania being part of the more dynamic Hungarian economy of the turn of the century. Indeed, the paper also challenges the folk theory that Vienna was a better economic manager of its peripheries than Budapest by showing that Bukovina and all the other peripheral regions ruled by Vienna had much lower growth rates than Transylvania did. Indeed, it is in the Austrian provinces that the pessimism of the internal colonialism thesis applies better in GDP per capita terms. This inter-imperial variation needs to be better studied in the future.

The comparative approach to the economic history of contemporary Romania's different regions is its infancy. Scholars generally shy away from studying the economic history of Transylvania in direct comparison with that of the old Romanian Kingdom and from my brief experience with this paper I have the sense that competitive research on this topic cannot be done without the rigorous study of sources in both Hungarian and Romanian and using seriously cooperative platforms between Romanian and Hungarian research institutions. This shift can advance not just the state of the art in scholarship but, perhaps more importantly, elevate the dismal level of the public discourse touching on these issues.

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