Abstract: After the First World War, several countries from the Balkans merged into the Kingdom of Yugoslavia – a newly established state, which from its early existence advocated free trade. With no formal trade barriers, some improvements in transportation and similar languages spoken within the Kingdom, one could expect considerable economic market interconnectivity to emerge within the Kingdom. Integrated markets that are dependent on one another should be less incentivized to engage in military conflict. However, at the beginning of the Second World War different parts of the Kingdom ended up on different warring sides, suggesting that the markets within Yugoslavia were not connected to a point that would prevent military conflict. This paper, therefore, presents an investigation of why economic integration in the Kingdom was not fast enough to create an environment wherein the forced of market integration were strong enough to avoid inter-regional military conflict within the state. We present evidence that suggests that the nationalistic sentiments which formed political bases for the military conflict between different parts of Yugoslavia also played a role in slowing down or completely stopping the process of economic integration in the Kingdom by preventing the creation or destroying the pre-existent multi-ethnic trade networks. This analysis is undertaken by combining historical context with formal econometric estimations, and with the special emphasis on the fact that ruling elites did almost everything in their power to deter nationalistic and ethnocentric sentiments.

Key words: Market integration, nationalism, trade networks, Yugoslavia, ethnic policy
Acknowledgements

I wish to offer my thanks to my supervisor for her brilliant guidance and to Lund University for making this research possible. Special thanks to Olivera Garašanin-Pavlek for her motivation, useful suggestions, and her help in the data gathering process; Anneke Bösche, Marija Plavšić and Stefan Šaranović for their brilliant comments and critique; Olivera Garašanin for her help in gathering historical material and to Dominic Mealy for correcting my grammar. Any remaining errors are exclusively mine.
# Table of Contents

Chapter 1: Introduction .................................................................................................................. 6

Chapter 2: Historical Background: From the Kingdom of the Serbs, Croats and Slovenes to the Kingdom of Yugoslavia and the Second World War .................................................................................. 10
  
  2.1 Nationalism, ethnic networks, trade and peace theory in the Yugoslav context .............. 14
  
  2.2 Transportation Costs: Development of Railroad Infrastructure in the Kingdom of Yugoslavia 17

Chapter 3: Data and Methodological Approach: Measuring Integration and Ideology .......... 20
  
  3.1 Data: Sources, Measurements, and Descriptive Presentation ............................................ 25

Chapter 4: Results .......................................................................................................................... 30
  
  4.1 Formal analysis: Pooled OLS ............................................................................................... 31
  
  4.2 Inclusion of Royal Policies into the Formal Analysis ......................................................... 36

Chapter 5: Conclusions and Final Remarks .............................................................................. 40
List of Tables

Table 1: Summary statistics for the main variables .......................................................... 28
Table 2: Pooled OLS estimation ...................................................................................... 32
Table 3: Pooled OLS with time variables ......................................................................... 35
Table 4: Pooled OLS with policy impact .......................................................................... 37
List of Figures

Figure 1: Railroads in the Kingdom of Yugoslavia (Statistical office of the Republic of Serbia). 19
Figure 2: Prices of selected products through years (Statistical office of the Republic of Serbia) 27
Figure 3: Integration comparison ......................................................... 30
Chapter 1: Introduction

During the period between the two world wars, the level of commercial integration between the various markets of the Kingdom Yugoslavia was affected by two opposing forces. On the one hand, the development of communications and transportation, as well as the removal of trade barriers and the formal advocacy of free trade among member states with modest economic growth in the years immediately following the First World War; processes that should have enhanced the interconnectivity between Yugoslav regional markets. On the other hand, starting from the second half of the 1920s, ethno-nationalist movements and sentiment, backed up by nationalistic tendencies in some European countries, was on the ascendancy; movements which may have retarded the creation of networks which would otherwise have helped in the promotion of trade among Yugoslav member states.

After the First World War, the markets of several Balkan countries were merged as a consequence of the Yugoslav unification, which reduced the cost of trade between them; several ethnic, national and religious groups agreed to form one country and remove trade barriers which existed on the provincial and national levels (Troch, 2010). This unified market operated under political institutions that officially promoted free trade and protected property rights (Petranović & Zečević, 1985). In addition, some minor investments were made in transport infrastructure (Ilijin, 2014; Jovanović et al., 2015). Therefore, ceteris paribus, one would expect a considerable rise in market integration between the member states in the Kingdom of Yugoslavia.

Many studies of trade and the probability of conflict (such as: Oneal & Russett 1997, 1999; Gartzke, et al. 2001; Russett & Oneal, 2001) suggest that higher economic integration due to free trade should decrease the likelihood of conflict. One important reason for a reduced probability of military conflict is the cost of war, which is higher for the more economically integrated regions than for the less-integrated ones. Nevertheless, in spite of the conditions being favorable for market integration, the constituent states of the Kingdom of Yugoslavia ended up on opposing sides in the Second World War. Hence, the forces that should, in principle, have increased market integration in the Kingdom of Yugoslavia, although not weak, were not strong enough to reduce the probability of military conflict to the point that would prevent it.
Why were the markets in the Kingdom of Yugoslavia not integrated in the interwar period to a level capable of making the cost of conflict high enough to discourage the “within-Yugoslavia” military strife, or to unite the entire country with the same warring side? We propose that the answer to this question is that, to a certain degree, prevalent ideologies expressed in ethnocentric form slowed down the integrating forces among the member states of the Kingdom of Yugoslavia and that nationalistic struggle among the different ethnicities constituting Yugoslavia played a role in this process. This hypothesis acknowledges the concurrent existence of both the forces that typically play a role in enhancing economic integration and nationalism, which presumably slows down the integration process. Moreover, if this hypothesis is true, the fact that different regions of the Kingdom of Yugoslavia ended up on opposing warring sides cannot be considered peculiar, even in the light of free trade and peace theory: economic integration in the Kingdom of Yugoslavia was “regionally asymmetric” and slowed down by ideology, and was, therefore, never fully realized. To put it another way, this hypothesis asserts that forces which fostered economic integration were stronger when the trade was carried out between the regions which were more ethnically similar than when the trade was conducted between the regions which were less ethnically homogenous.

Studying market integration and commerce in the Balkans during the interwar period may provide insights which can reach beyond mere intellectual curiosity, especially when one recognizes that the government of the Kingdom implemented very strict policies intended to deter nationalism and foster a shared Yugoslav identity, hoping that “Yugoslav values” would suppress and supersede the existing national identities and values. These policies went so far as, for example, changing the name of the country: from the Kingdom of Serbs, Croats and Slovenes to the Kingdom of Yugoslavia (from the documents collected by Petranović & Zečević, 1985).¹

An additional aspect of this study will be to observe how given policies intended to alter the presumptions of ethnicity and identity affected nationalism from the perspective of economic integration. Thus, some of the conclusions of this study may be of value to policy makers today, in particular to those policy makers in the European Union who see the need to foster a European civic and cultural identity as necessary for the greater political and economic integration of

¹ In this study the Kingdom of Yugoslavia will be the “default” name used when it is referred to this country in order to avoid possible confusions. Only when historical events are depicted, name The Kingdom of Serbs, Croats, and Slovenes will be utilized for its period of the existence.
Europe. This can be derived from an analysis of the relative success and failure of the attempt to build an economically and culturally integrated Kingdom of Yugoslavia during the inter-war period and the current ongoing attempt to create an economically and culturally integrated European Union today.

This thesis will primarily focus on the centripetal and centrifugal forces that affected market integration in the Kingdom of Yugoslavia. More precisely, this paper will try to unveil the influence of, if any, “informal” economic nationalism on the economic integration of the Kingdom of Yugoslavia, in the period between the two wars. The main question of this thesis is therefore: given that efforts were made by the ruling elites to suppress nationalistic tendencies, did nationalism make market integration asymmetric in the Kingdom or not?

The second chapter of this study consists of the historical context, which provides the basis and starting point for the ensuing research. We will present a brief summary and analysis of some of the key historical events in the Kingdom of Yugoslavia with the intention of clarifying the reasoning behind the proposed hypothesis with respect to economic theory and history. The contextual background is intended to provide an insight into relevant institutional factors that could have affected economic interconnectivity and to describe the relationship between ethnicities which constituted the Kingdom of Yugoslavia, the events and state of affairs which led to ethnic tensions.

The methodological approach, theoretical background and the data used for the formal analysis are presented and developed in the third chapter of the paper. In order to address the question posed, we will mainly rely on the methodology employed by Federico (2007) who studied similar causes and consequences of analogous forces in Italy and Schulze & Wolf (2012) for the case of Austro-Hungarian Empire. Their formal methodology, based on the law of one price, will be used as a tool for testing our hypothesis. The methodological approach developed by the mentioned authors will be somewhat adjusted for the specific contextual properties of the time frame and region which are the subject of this paper.

In the fourth chapter of this study we will present the results of the research. Here we are going to apply a formal econometric analysis with the data gathered for the Kingdom of Yugoslavia. This part of the thesis is expected to provide us with results that confirm the findings
from previous studies that covered similar topics, i.e. that nationalism impacts the formation of 
trade-channels, increases trade costs, and consequently decreases the economic integration of 
different markets. In addition, we expect to be able to show how very strict policies intended to 
promote a certain direction might be completely ineffective no matter how strict, or even produce 
the opposite consequences of the ones intended.

The final conclusions and remarks based on these results are presented in the chapter 5 of 
the paper. In this final section the results will be summarized and the possible implications of the 
findings discussed.
Chapter 2: Historical Background: From the Kingdom of the Serbs, Croats and Slovenes to the Kingdom of Yugoslavia and the Second World War

On July 20, 1917, under the political sponsorship of Great Britain and France, the committee for the representatives of the Croatian, Slovenian and Serbian politicians in exile (the Yugoslav Committee) and the representatives of the Kingdom of Serbia signed the Corfu Declaration\(^2\) (Krfska deklaracija), agreeing to create Yugoslavia, *the Kingdom of the Southern Slavs*, which would join the territories and peoples of the independent Kingdoms of Serbia and Montenegro and the former South-Slav territories of the Austro-Hungarian Empire (Croatia, Slovenia, Dalmatia, Bosnia and Herzegovina, and Vojvodina). The newly formed kingdom was proclaimed on December 1, 1918 as a constitutional parliamentary monarchy, led by the Serbian Karadžorđević dynasty. The Kingdom of Yugoslavia incorporated the present-day states of the Republic of Serbia, Republic of Montenegro, Croatia, Slovenia, Bosnia and Herzegovina, and the Former Yugoslav Republic of Macedonia; hence, in addition to the three dominant ethnic groups – the Serbs, the Croats and the Slovenes as the name implies – the Kingdom of Yugoslavia included a sizable number of other ethnic groups.

One of the first policies of the Yugoslav government in 1919 was the Agrarian Reform (Petranović & Zečević, 1985, p. 275), which resulted in the breakup of privately owned large landed estates and the elimination of feudal institutions (e.g., kmetstvo) in the areas where it continued to exist after the conclusion of the war. In an attempt to promote free trade, the government issued two official Trade Liberalization Acts, on March 18, 1919 and on November 5, 1919. These acts were introduced because the government believed that free trade would enable the uninterrupted supply of goods and services to all regions in the kingdom (Miletić, 2003).

\(^2\) Further information about these negotiations and the Corfu Declaration can be found in the original documents of the time published by Petranović & Zečević (1985, p.65-75).
Prior to government issuing these Trade Liberalization Acts, trade barriers existed on both the national and provincial levels; afterwards, resistance to trade liberalization in the form of trade barriers existed only on the local, municipality level (Miletić, 2003). Nevertheless, the Trade Liberalization Acts did not completely eliminate trade barriers. Miletić (2003) argues that the reason for this is to be found in the lack of government legitimacy prior to the adoption of the constitution. Thus, any discussion regarding free trade in the Kingdom of Yugoslavia becomes relevant only after 1921, when the first constitution was adopted and all official forms of trade barriers were to a large extent removed. From then on, until 1939, it is relatively safe to assert that trade operated without major formal barriers throughout the kingdom.

On June 28, 1921, the Kingdom of Serbs, Croats and Slovenes established its first constitution. The constitution limited the king’s powers, protected private property, and established “serbo-croat-slovenian” as the official languages of the kingdom. The extent to which these constitutional provisions were followed in practice is beyond the scope of this research; however, it is important to mention that the constitution achieved some sort of institutional stability that had an impact on the economy, which manifested itself in the influx of foreign capital immediately after the constitution was adopted (Petranović & Zečević, 1985, p. 400).

In spite of the adoption of the new constitution, the existing nationalistic narrative was not eliminated. The following quote from the Memorandum of the Croatian political block 3 (Petranović & Zečević, 1985, p.108) provides a good example of the ongoing ethnic rivalries: (Beginning of the quote)

“Serbian politicians...inaugurated under the aegis of Yugoslav national unity a Croat-eating policy. The primary and obvious aim of this policy is simply to ethnically destroy the people of Croatia.”(End of the quote).

Between 1912 and 1928, ethnic tensions between the Serbs and Croats continued to escalate. On June 20, 1928, after an argument full of national sentiment, four Croatian parliamentarians were assassinated. Three died of their wounds almost immediately, with the fourth, Stjepan Radić, the leader of the Croatian Peasant Party was shot by Puniša Račić, a deputy

---

3 The Croatian political block was made up of the Croatian political parties. Parties constituting this heterogeneous coalition shared only one aim: to show the strength of Croatian political will in opposition to the so-called centralistic powers (Petranović & Zečević, 1985, p.108).
of the Serbian Radical People’s Party, briefly recovering before later succumbing to his injuries (Glenny, 2012).

Faced with the threat of Croatian secession, a constitutional and parliamentary crisis emerged, which political parties were apparently unable to resolve (Dobrivojević, 2008), King Aleksandar Karadžorđević suspended the parliament and the 1921 constitution, and established a dictatorship on January 6, 1929. For an in-depth discussion of the dictatorship, see Dobrivojević (2008), only the measures that could have affected regional economic integration of the Kingdom of Yugoslavia will be presented in this paper.

The name of the Kingdom of Serbs, Croatians and Slovenes was changed to the Kingdom of Yugoslavia in 1929. The king formally eliminated territorial borders between the member-states, eliminated the existing 33 oblasts, and divided the country into nine provinces called “banovine.” None of the nine new provinces were large enough to be economically self-sufficient. Moreover, in an effort to preserve the unity of the kingdom and suppress nationalism, King Aleksandar Karadžorđević outlawed all political parties based on ethnic, national, or religious affiliation. His goal was to replace the old parochial ethnic sentiments with a new, unified Yugoslav national sentiment, and his policies were crafted to create a “melting-pot” wherein his subjects would begin to feel like Yugoslavs rather than Serbs, Croats, Slovenes, etc.

Above and beyond these policies, King Aleksandar advocated ideology of “integrated Yugoslovism”, the official name for the ideology which promoted a unified Yugoslav national sentiment. Integrated Yugoslovism included less formal acts such as language unification (Petrović, 2009), the inclusion of the Yugoslav national idea in the standardized system of education (Troch, 2010), legal system, and national holidays. Since the constitution was suspended, and the freedom of press was no longer guaranteed, the government heavily controlled and censored the press in order to promote the unified national sentiment. Cultural life was also orchestrated to promote the integrated ideology of Yugoslovism (Dobrivojević, 2005). For example, articles published in the newly established magazine “Yugoslav” portrayed the

---

4 Since almost all political power was now in hands of the King, scholars use the term the “King’s dictatorship” in order to refer to political state of affairs from 1929 to 1934.

5 The King thought that a division of the country making regions economically “self-sufficient” would promote nationalism and provide support for potential secession. Smaller regions, economically dependent upon one another would have higher incentives to stay within the same borders (Kovačević, 2015).
values of the politically acceptable ethnic identity within the limits of integrated Yugoslovenism (Petrović, 2007).

On September 3, 1931 King Aleksandar Karađorđević formally ended his open dictatorship by decreeing a new constitution. The new constitution did nothing to limit the King’s executive powers; instead, it provided legal foundations for the royal dictatorship. Its value was primarily political, not practical, since it did not contain provisions for the return to a more democratic form of government (Dobrivojević, 2008). Unopposed national elections were held during the same year, and the resulting political dissatisfaction was further exacerbated by the growing economic crisis intensified by the world wide Great Depression.

On October 9, 1934, while on a state visit to France, King Aleksandar Karađorđević was assassinated in Marseilles. The assassination was organized by the pro-Bulgarian Internal Macedonian Revolutionary Organization (IMRO or VMRO), which fought for the secession of Vardar Macedonia from Yugoslavia, in alliance with the Ustashe, the right-wing Croatian nationalist secessionist movement. The Bulgarian assassin Vlado Chernozemski was wounded by mounted French police and then beaten to death by the crowd. The assassination of King Aleksandar Karađorđević marked the end of the royal dictatorship and the end of the policies intended to create a unified Yugoslavian national sentiment.

A full decade after the creation of the Kingdom of Yugoslavia, the decrees and policies of King Aleksandar’s January 6 Dictatorship singularly failed to stimulate enthusiasm among the population and/or support for the national unification of the South Slavs (Petrović, 2007). In the aftermath of Aleksandar’s assassination, it was evident that there could be no return to the dictatorship and the forced decrees/policies of royal Yugoslovenism. Yet, a possibly ill-founded belief amongst the ruling elite – that it would be possible to preserve the Kingdom of Yugoslavia – lasted until 1939 when the status of Croatia within the Kingdom of Yugoslavia appeared to have been resolved. The establishment of the Banovina Hrvatska, an autonomous region consisting of the provinces with a majority Croat population, provided Croatia’s political elite with a sense of greater autonomy within the Kingdom of Yugoslavia and seemed to be a good compromise solution for all interested parties because it appeared to promise the end of ethnically based conflicts.
The hope was short-lived however. On April 10, 1941, after the invasion of Yugoslavia by the Axis powers, the Independent State of Croatia, the Ustashe puppet state of the Axis, was founded under the leadership Ante Pavelić. Engaged in a bloody civil war and the struggle for national liberation, Serbia joined the Allies. Croatia and Serbia ended up on the opposing sides of this world conflict.

2.1 Nationalism, ethnic networks, trade and peace theory in the Yugoslav context

It is clear that between the conclusion of World War I and the beginning of World War II government-sponsored endorsement of free trade in the Kingdom of Yugoslavia went hand in hand with the elimination of trade barriers and in so doing opened a path towards higher commercial activities among Yugoslav “member states.” Yet, it is also evident that the formal removal of institutional trade barriers among these “member states” would be irrelevant without the support of the prevalent ideologies (McCloskey, 2015).

Clearly expressed nationalism was part and parcel of the dominant ideologies in the Kingdom of Yugoslavia. These ideologies could have caused and/or contributed to the integration inertia in the changing trade environment; therefore, one of the main questions that we will address concerns the impact of these ideologies on the process of economic integration: namely, to what degree did ethnic strife influence trade relations in the Kingdom of Yugoslavia? While ethnocentrism was present in the political life of the Kingdom, it is not clear whether or not it had an equally strong impact on the Kingdom’s economy. Historical evidence indicates that forces for market integration and ideologically based ethnic constrains were concomitant during the interwar period, yet it is not clear whether dominant ideologies had any effect on the market integration in the Kingdom of Yugoslavia. Therefore, it is essential to supplement the outlined historical narrative with additional analysis. Explanations of the research methods and data that will be utilized for the purpose of more detailed analysis are presented in the third chapter of this research.
Historical events in the Kingdom of Yugoslavia, as well as previous works in the field (such as Schulze & Wolf, 2012 for the case of the Austro-Hungarian Empire), suggest that the existence of nationalistic ideology can inhibit the potential decrease in trade costs. In other words, nationalism could have retarded actual market integration by preventing the creation of the new multi-ethnic trade networks or destroy the existing multi-ethnic trade networks. Commerce-enhancing policies incentivized higher levels of trade by creating a level playing field for market participants in which the establishment of multi-ethnic commercial networks was beneficial. Considering the fact that trade networks tend to evolve along socio-cultural and ethnic lines (Greif, 1993), we are arguing that two markets characterized by modest or absent ethno-linguistic similarities, or, in this case, ethno-confessional similarities, are, ceteris paribus, less likely to trade more with each other than the markets with larger ethno-confessional similarities.

The formation of trade networks reduces trading costs. One can identify two major channels through which ethnic networks might promote trade among the markets (Rauch & Trinidade, 2002; Greif, 1993). First of all, networks could present potential “supply centers” of market information, which would, for the most part, affect trade based on differentiated products in contrast to trade based on homogenous products. Secondly, commercial networks could create mechanisms for community administration and enforcement of penalties for the traders who do not comply with agreed rules of the community (e.g. blacklisting). This channel has an effect on trade independently of the properties of the traded products. Ethnocentric ideologies, such ones which were prevalent in the Kingdom of Yugoslavia, could prevent the creation of trade networks among ethnically different markets and in so doing prevent the potential commercial cost reductions and discourage market integration.

What was the impact of imperial decrees on the integration of Yugoslav markets? Since it appears that ethnocentrism played a significant role in economic integration, the royal policy of creating an artificial Yugoslav “melting-pot” would have almost certainly been extremely important. Assuming that nationalism affected commerce negatively, had Aleksandar’s policies successfully altered dominant ethnocentric ideologies and suppressed ethnocentrism, they would have had a positive effect on regional economic integration in the Kingdom of Yugoslavia. However, it might be the case that royal policies were counterproductive. Although most of the

---

6 The methods of how ethnic similarities are measured, as well as the reasons why we use religious similarity instead of, for instance, language, to account for the ethnic differences are described in the chapter 4 of this study.
public activities that encouraged ethnocentrism were forbidden, “undetected” ethnocentrism could have remained alive and well in every aspect of public life, including the economy. For instance, one could always decline to participate in a trade network with another state without showing explicitly that the refusal to participate was founded on an ethnically based decision. One could plausibly argue that individuals who were legally prevented from expressing their strong ethnic viewpoints most likely continued to participate covertly in ethnically motivated decision making and that their participation in these “clandestine” activities may have even increased. In this case, even if their hidden attitude may have been fairly obvious, they could not have been labeled as “nationalistic” by authorities. To express this in another manner, suppressed ethnocentric sentiments could “backfire” and produce an even lesser degree of economic integration because individuals were not allowed to express their ethnocentric sentiments openly but were able to hide their ethnocentric bias which might have influenced their political and/or economic decisions.

Additional peculiarity arises from the fact that different member states of the Kingdom of Yugoslavia ended up on different warring sides in the Second World War. Free trade should in principle reduce the probability of countries engaging in armed conflict. This presented tendency has been shown in a variety of empirical research (for example, Oneal & Russett 1997, 1999; Russett & Oneal 2001; Gartzke, et al. 2001) and it is grounded in economic theory: to put it simply, the costs of engaging in conflict rises with the increasing integration of markets, thereby reducing the probability of conflicts. Furthermore, McDonald (2004) argues that: (Beginning of the quote)

“Free trade, and not just trade, promotes peace by removing an important foundation of domestic privilege-protective barriers to international commerce-that enhances the domestic power of societal groups likely to support war, reduces the capacity of free-trading interests to limit aggression in foreign policy, and simultaneously generates political support for the state often used to build its war machine.” (End of the quote).

Free trade existed in the Kingdom of Yugoslavia, yet it did not bring economic integration to the level which would prevent military conflict, and in World War II member-states of the Kingdom of Yugoslavia ended up on opposing warring sides. This is an important additional reason that it might be of interest to examine closely the process of market integration in the
Kingdom of Yugoslavia. Evidence that prevalent ideologies created friction that limited market integration in the Kingdom of Yugoslavia would clearly indicate that free trade is a necessary, but not sufficient, condition to prevent armed conflict. This would conform to the above-stated results of theoretical and empirical research and would contribute to the area of research on the relationship between commercial integration and lack of military conflict.

2.2 Transportation Costs: Development of Railroad Infrastructure in the Kingdom of Yugoslavia

Transportation costs are a critical determinant for the level of trade between different regions: therefore, it is necessary to examine the development of transportation infrastructure in the Kingdom of Yugoslavia. During the inter-war period the most important mode of commercial transportation in the Kingdom of Yugoslavia was rail transportation (Latifić, 1997). Over 90 percent of the goods were transported via railways. The data provided by the Statistical Office of the Republic of Serbia indicates that rail transportation remained the dominant mode of transportation for some time after World War II. During the interwar period, there was an increase in the number of imported road vehicles due to higher demand for vehicles not used for cargo transportation (Petranović & Zečević, 1985, p. 400-401). Imports of road vehicles, hence, had not substantially increased commercial transportation by road. The data of the Statistical Office of the Republic of Serbia indicates that the transportation of goods by river or sea was insignificant within the Kingdom of Yugoslavia.

At the present time, researchers on the topic do not fully agree whether or not major advancements were made in the railroad infrastructure during the whole interwar period in the Kingdom of Yugoslavia. The general consensus is that after World War I, Yugoslav railroads were in a dismal shape in the Kingdom and that even though reconstruction efforts were underway; the renewal process was slow in the first years after the war (Ilijin, 2014; Jovanović et al., 2015). While Jovanović et al. (2015) tentatively state that there was “certain advancement in the construction of railways” Ilijin’s analysis (2014) provides a less optimistic picture. However,

---

7 For theoretical considerations see: Balassa (2013) and for some examples of empirical estimations see: Schulze & Wolf (2012) or Federico (2007).
these studies are either focused on specific time periods after World War I or they do not provide convincing evidence to support their claims. Upon review of additional sources, (“Sto godina železnica Jugoslavije, 1849 – 1949”, 1949; Burzanović et al., 2009; data from Wiener Institut für Wirtschaftsforschung, & Wiener Institutfür Wirtschafts book, 1938) one can conclude that the condition of the railroads in the Kingdom of Yugoslavia was modestly improving during the interwar period.

Figure 1 depicts the total railway length in kilometers (solid line) and total ton-kilometers for the transported commodities (dashed line) by year for the observed period starting in 1922; the first period for which data is available. Throughout the period, weakly increasing trends can be noted in the total railway length: compared to the length of railways in 1922, the length of railways increased by approximately 25% by 1939, suggesting that some improvements, at least in terms of quantity, were made. Sharper and increasing trends are present in the total ton-kilometers. Between 1922 and 1939, the total length of ton-kilometers had a three-fold increase. Figure 1 shows that the increasing trend of total ton-kilometers was not uninterrupted since there was a sharp decline in ton-kilometers between 1929 and 1932. The series bottomed out in 1936, and the increasing trend continued afterwards. Coincidentally, the break in the total ton-kilometers series coincided with the introduction of the dictatorship of King Aleksandar Karadžorđević. The break in the series can also be the result of the effects of the Great Depression.

The purpose of this section of the thesis was to present the historical context for some crucial aspects of the research and the historical foundations for the proposed hypothesis. Although the historical narrative provides a basis for the study of market integration, it does not provide sufficient information for the meaningful analysis of the extent of the impact that ethnocentric ideology had on the regional economic integration of the Kingdom of Yugoslavia.

In the next part of the thesis, the methodology for assessing the impact of nationalism on the economic connectedness of the regions in the observed country will be developed.
Figure 1: Railroads in the Kingdom of Yugoslavia

Source: Statistical Office of the Republic of Serbia; publication “Jugoslavija 1918-1988, Statistički godišnjak”
Chapter 3: Data and Methodological Approach: Measuring Integration and Ideology

The estimation of the impact of nationalism on economic integration will rely on the law of one price, as in Engel & Rogers’ (1994), Trenkler & Wolf’s (2005), Federico’s (2007), Schulze & Wolf’s (2012), and in other studies. Systematic deviations from this law will be used as an indicator of the total cost of trade. Simply stated, the law of one price suggests that under conditions of market equilibrium and in the absence of trade costs, i.e. transportation costs, asymmetry of information, barriers to trade, etc., the same commodity cannot have different prices in different markets. If a price $P$ of a commodity $g$ is higher on the market $i$ than on the market $j$ and there are no trade costs, then it is profitable to buy good $g$ in the market $j$ and sell it to the consumers on the market $i$ – arbitrage trade. As long as $P^g_i > P^g_j$, subjects will engage more in an arbitrage, new subjects will engage in profitable trade and/or subjects already engaged will tend to trade more, which will bring down the price of a good $g$ on the market $i$ (or increase the price in the market $j$) due to a standard supply and demand relationship. Equilibrium is achieved when $P^g_i = P^g_j$. A higher degree of trade between the markets would lead prices closer to an equilibrium relationship, and, therefore, markets are more integrated when the prices of the same commodity are closer to each other. In the case when trade costs between markets $i$ and $j$ exist, $T_{ij}$, we say that markets are fully integrated when (Federico, 2007):

$$|P^g_i - P^g_j| \leq T_{ij}$$

---

8 For a somewhat more formal, analytical, depiction of the relationship between price dynamics and trade costs than the one presented here, we refer the reader to Schulze & Wolf (2012).
Following the approach of Schulze & Wolf (2012) we assume that total cost of trade is divided into three components: 9

1) Transportation costs, which are completely, or at least to greater extent, dependent on distance.
2) Trade costs that depend on networks and related trade creating factors.
3) Market-specific trade costs, specific to a particular market but not specific to any pair of markets.

Intuitively, the law of one price states that, assuming there are no trade costs, prices for identical goods should be the same in different markets. The further away observed prices are for the same commodities on two markets, the higher the trade costs between these markets are. As the trade costs rise, the area for arbitrage shrinks. A smaller area for possible trade implies a smaller level of possible economic integration. Hence, the distance between prices on the market, for the same goods, may be used as an approximation for the level of economic integration between these markets; more integrated markets will have prices that are closer to each other. In this model where trade costs are only determined by the three mentioned factors, if there are no transportation and location specific costs, then the price differences will be the result of trade costs that depend on the networks or lack thereof.

Deviations from the law of one price (approximation for the market integration) will be measured in this study, following Federico (2007), as the absolute difference between prices $P_{it}^g$ and $P_{jt}^g$, for good $g$ on the markets $i$ and $j$ in period $t$. Besides this measure, an absolute logarithm of the price ratio between prices of the same good in the markets $i$ and $j$ will also be considered as one of the measures of the deviation from the law of one price. Utilization of the two different measures, although of a similar type, could increase the reliability of the results obtained.

---

9 We are not explicitly assuming the existence of the formal trade barriers since for the time and place of the analysis formal trade barriers did not exist. Implicitly, formal trade barriers would be considered as trade costs that depend on networks and related trade creating factors.
Transportation costs will be approximated by the rail distance between markets $i$ and $j$ in kilometers, while the ethnic networks effect will be approximated by the religious similarity between markets $i$ and $j$. Religious similarity is calibrated by:

$$
religion_{i,j,t} = \sum_{r=1}^{n} (c_{i,t}^r \ast c_{j,t}^r)
$$

where $c_{i,t}^r$ is the percentage share of religion $r$ in the market $i$ at time $t$, and $n$ is the total number of religious groups. This measure is based on the ethno-linguistic measure presented in Schulze & Wolf (2012) and varies between 0 (no similarity between markets $i$ and $j$) and 1 (no differences). It can be observed as a “matching probability” which is used as a proxy for membership of a specific ethno-linguistic network (Schulze & Wolf, 2012). Notice that the presented measure does not ignore the ethnic diversity existent within the specific markets.

Schulze & Wolf (2012) use language in order to estimate bilateral ethno linguistic similarity between populations of the observed markets. In this research, however, language differences would not be able to provide a realistic measure of ethnic similarity, because the languages in the Kingdom of Yugoslavia were not dissimilar enough to create major communication problems in the creation of networks, with the exception of Slovenian (Lencek, 1976; Brozović & Ivić, 1988). Even if they were not that similar, or we wanted to use the languages despite their similarity, it would be practically impossible to use languages since most of them – Serbian, Croatian, Macedonian, Montenegrin, and Bosnian – are often treated as one language; “Serbo-Croat”, in the censuses, which are the main data sources for ethnic composition. Since the networks of interest for our study are the ones formed on the basis of ethnic sentiment, it turns out that religious confession in the case of the Kingdom of Yugoslavia constitutes a better estimation of bilateral ethnic similarity than language. To state matters plainly: much of the ethnic sentiment in the Balkans is formed on the basis of religion. In certain censuses, ones declaration of being a Muslim is treated both as a statement of religious confession and ethnicity. On the other hand, it is safe to assume that, excluding Slovenian,10

---

10 If the Slovenian language created a special barrier to trade, this would be captured in one of the market specific dummies since, as will be shown, we are only observing one market for Slovenia. This hypothesis is true if we assume that other languages are different from Slovenian to the similar extent. This also applies to Macedonian, which is also sometimes observed as specific to the certain degree.
language differences, being negligible, would not create major frictions in trade transactions, i.e. people speaking different languages in this region would probably not have problems understanding each other in trade transactions. For the reasons presented, it is clearly preferable in the case of the Kingdom of Yugoslavia to base ethnic differences on religious confession rather than on language.\footnote{The strong ties between ethno-confessional differences and nationalism in the Balkan region are studied in detail in Bardos (2013).}

The variables will be used to estimate the following specification by ordinary least squares method (OLS):

\[
|p_{i,g,t}^g - p_{j,g,t}^g| = \alpha_0 + \alpha_1 \text{raildistance}_{i,j,t} + \alpha_2 \text{religion}_{i,j,t} + \sum_{h=1}^c \gamma_h \text{market}_h + \epsilon_{ij,t}^k
\]

where \(|p_{i,g,t}^g - p_{j,g,t}^g|\) is the absolute value of the price difference of the good \(g\) between markets \(i\) and \(j\) in period \(t\); \(\text{raildistance}_{i,j,t}\) is the railway distance between markets \(i\) and \(j\) in period \(t\); \(\text{market}\) is a set of dummies over all markets \(h\) which grasps unobservable city-specific factors; \(\epsilon_{ij,t}^k\) is an i.i.d. error component; while the index \(g\) represent the good which is observed.

If our hypothesis is correct it should be expected that the coefficient of the \(\text{religion}\) variable (\(\alpha_2\)) is negative and significant. This would suggest that the markets with higher ethno-confessional similarities will have better formed networks and less distant prices for the same goods, \textit{ceteris paribus}, which implies smaller trade costs and higher market integration between them. In the case of the Kingdom of Yugoslavia, this would suggest the existence of economic nationalism affecting the economic integration of markets, if we accept that ethnicities were determined significantly by the religious practice and networks were formed on ethnic bases. Two markets that are different in the composition of nationalities would have to overcome higher trade costs than two markets that are similar in ethnic makeup. Another expectation is that the coefficient of the railway distances is positive. This expectation follows from the assumption that the further the markets, the higher trade costs, which would “naturally” lead to lesser degree of market integration.

Although the direct implications of the theoretical model are followed in order for a specification to be formulated there is no guarantee that the assumption of independent and
identically distributed error is true. By following a theoretical model it is less likely to have the problems of consistency in the estimation. Federico (2007), for example, argues that given independent variables that are strictly exogenous it is safe to use OLS estimator. In addition, time invariant sources of potential problems of estimations are mostly eliminated by inclusion of the market specific variables. For instance, by including market specific dummies, we are controlling for the potential of omitted variable bias caused by the major religion practiced in the given market. Helble (2006) argues that the type of religion practiced significantly affects the level of trade. Major religion practiced will simultaneously be related to our measure for ethnicity. But, this problem as well as many other time-invariant problems (such as, for instance, minor impediments to trade on the municipality level, or particularly inaccessible position of the market) should in principle be captured within the market specific controls. However, we believe that additional caution can be beneficial in terms of the resulting robustness especially when certain contextual facts are taken into account.

It is also unlikely that there will be many omitted time variant factors since the estimations will be done for a relatively short time-frame, as will be presented below. But there are some factors which need to be accounted for in order to prevent misspecification of the relationships observed. An appropriate example for one time variant factor we should not neglect is the Great Depression. The economic consequences of the Great Depression were felt in the Kingdom of Yugoslavia during the observed period. Moreover, The Great Depression could simultaneously affect the costs of trade and the barriers to trade evoked by ideology, and the volume of trade which would, concerning economies of scale, impact the economic integration. In addition, there are suggestions that the Great Depression increased economic and political nationalism (Robbins, 2011) and effectively influenced the formation of networks. The impact of the Great Depression would not, of course, be uniform over time. Hence, it is necessary to add to the main specification (1) additional controls that could approximate some of the time-variant factors, such as the Great Depression. Unfortunately, this will not completely eliminate the possibility that other undetected time-variant factors are causing distortions in the obtained results but additional robustness checks with minor changes in specification should be able to lend some confidence to the results obtained.
3.1 Data: Sources, Measurements, and Descriptive Presentation

Data for the Kingdom of Yugoslavia is limited but can be considered as sufficient to provide some insights into the relationships observed. The Statistical Office of the Republic of Serbia\textsuperscript{12} kept track of the retail prices for 13 products on 10 markets (cities) from 1926-1939.

Only the price data for several products may provide meaningful information, with respect to the theoretical framework described. Namely, since this research is relying on the law of one price, products used for the estimation should be as homogenous in their quality across regions as possible. For some products, such as laundry-detergent (soap), various meat products, cheese etc., it is not safe to assume that measured prices where reflecting the prices of goods of a similar quality. Statistical offices of the time probably tried to measure the prices of similar types of products, but there is no evidence that can confirm this supposition especially for some vaguely labeled products. For instance products categorized as “pork with bone” could refer to a specific part cut of pork, or it could refer to the average price of pork meat measured with bone.

Another property that a given product should posses in order for its price to provide meaningful information for the purposes of this paper is \textit{tradability}. If a product cannot be traded with then its price is not particularly informative about the trade costs or the market integration. For example, it is reasonable to express doubt whether white cheese or meat can preserve its quality when being transported by train with poorly developed or non-existent refrigeration. In addition, some goods can be tradable but still not traded in a sufficient volume for its prices to provide any evidence of trade costs. It should also be noted that, since the proposed measure for ethnicity is based on religion, it would probably be safe to avoid prices of goods that could be related to religion-based dietary preferences, such as meat products. Inclusion of such products might cause serious distortions in the estimation.

These are some of the reasons why in most of the studies that utilize the methodology described above, researches use the prices of grains. The datasets from the Statistical Office of

\textsuperscript{12} This data is collected from yearbooks, mainly from Statistical Yearbook of Yugoslavia 1918-1988 (Statistički godišnjak Jugoslavije (1918-1988))
the Republic of Serbia do not provide prices of grains for the periods observed. However, there are four products that can be safely assumed to be both tradable and fairly homogenous – potato – or at least properly reflective of grain prices: white bread, black bread and white wheat flour. The trajectory of these prices in dinars per kilogram over the years is presented in the Figure 2. It is, therefore, asserted that the prices of these four products are the least likely to create biases, simply because they reflect the prices of grains which in most cases decently satisfy the necessary assumptions (wheat flour and breads), or by their own properties are likely to satisfy given assumptions (potato). Note that for these products it is also assumed that their prices were not regulated in any form during the observed period. There is evidence suggesting that immediately after WWI, in 1919, there were some price-controls, which were abolished by along with trade liberalization (Miletić, 2003). For the period 1926-1939 we could not find evidence that the prices of these four products were systematically controlled. Possible existence of minor, local, and undetectable price controls will likely be captured by market (city) specific variables.

For these four products it is possible to extract prices in dinars per kilogram from 10 major cities in the Kingdom of Yugoslavia: Belgrade, Banja Luka, Sarajevo, Split, Zagreb13, Skoplje, Cetinje, Ljubljana, Niš, and Novi Sad; three cities from the modern day Republic of Serbia, two from Bosnia and Herzegovina and Croatia, and one from Slovenia, Former Yugoslav Republic of Macedonia and Republic of Montenegro. Unfortunately, the data from Cetinje, a town in Montenegro, has to be disregarded, as it was not connected directly by railway to any of the observed cities during the observed period. Burzanović et al. (2009) vividly explain how problematic it was to transport goods from Montenegro to other parts of the kingdom in the observed period just because Montenegro was not properly connected via railway with the rest of the kingdom. Thus, the inclusion of Cetinje would likely cause more problems in the estimation than it would provide additional information; first because it would be highly problematic to estimate the transportation costs since there was no railway connection, and second, even if the costs were estimated they would probably be so high as to the point of creating unnecessary distortions. Those are the reasons why Cetinje will be treated as an outlier and it will be excluded from the estimations.

13 Prices for Zagreb for the year 1926 were not available for some products. We have interpolated their values by using simple a linear trend.
Out of nine cities 36 city pairs are obtained for which rail distances are calculated mostly from the information obtained from the book Sto godina železnica Jugoslavije (Hundred Years of Railways in Yugoslavia). We have collected scattered data about the distances between different city-pairs and rearranged them in a comprehensive dataset of railway distances for all city pairs in kilometers.

**Figure 2:** Prices of selected products through years

![Prices of selected products through years](image)

*Source: Statistical Yearbook of Yugoslavia 1918-1988 (Statistički godišnjak Jugoslavije (1918-1988))*

During the observed period railroads were built. However, based on the data from Sto godina železnica Jugoslavije, the railway distances of interest were not changed and neither was their quality improved in a manner that would potentially reduce the transportation costs to a great degree. The data presented implies that the measure of railway distance is time-invariant, meaning that the distance between certain city-pairs stays the same during the whole (1926-1939) observation period. Some of the city-pair distances were approximated. Due to the lack of the direct length measurement for these city pairs the length of different railway segments between them for which data existed were added in order to recover the length between given city-pairs.
Clearly, this might lead to some errors in measurement,\textsuperscript{14} which could impact upon the reliability of the results. In order to be sure that the results obtained were not affected by the possible measurement errors, similar estimations with the “as the crow flies” distance will be conducted which would serve as another approximation for the distance between the markets (cities).

In order to create the measure of religious similarity, census data from 1921 and 1931 are used. These censuses were provided by the Statistical Office of the Republic of Serbia. Data from the census from 1921 was used to create the measure of religious similarity for the period 1926-1931 for all city-pairs, while census data from 1931 was used to generate religious similarity measure from 1931-1939. The religious categories used in these censuses are as follows: Orthodox-Christian, Catholic, Greek-Catholic, Evangelist, Muslim, and Judaism.\textsuperscript{15}

\textbf{Table 1: Summary statistics for the main variables}

\begin{tabular}{|l|c|c|c|c|}
\hline
\textbf{Variable} & \textbf{Number of observations} & \textbf{Mean} & \textbf{Std. Dev.} & \textbf{Min} & \textbf{Max} \\
\hline
Absolute price difference & 2016 & 0.515 & 0.383 & 0 & 2.363 \\
Railway distance & 2016 & 588.715 & 281.611 & 77.1 & 1308.300 \\
Religious similarity & 2016 & 0.341 & 0.228 & 0.010 & 0.968 \\
\hline
\end{tabular}


When the obtained data was polled over the 14-year period 2016 observations were obtained. These data-points will be used for the estimation of the specification (1) and robustness checks. In Table 1 we have depicted the summary statistics for the key variables from our sample.

Limited data availability introduces some restrictions concerning the methods that could be used in order to estimate the desired relationships. For instance, if fixed-effects estimators were used, it would not be possible to track some of the key variables of interest. Namely, the

\textsuperscript{14} To avoid possible errors in measurement we have also compared our estimates with the today’s distances between city-pairs observed by using the tariff calculator from webpage:\texttt{http://jizdnirady.idnes.cz/vlakyautobusymhdvse/spojeni/}. The distances which the tariff calculator reports are very similar to our estimations of the railway distances. Clearly, improvements are made over the years and the distances are not exactly the same for some city pairs.

\textsuperscript{15} Besides official religions, there are two more categories: other and unknown. These were also included in the estimations because we consider that they also provide some information about ethnic structure of the population.
fixed effects estimator, although likely more consistent than pooled OLS, in this case would not be able to provide information which would be useful to observe, simply because some of the important variables are not time variant: railway distances don’t change through time at all, while the measure for ethnic similarity change only once. In addition, a narrow time frame is observed, which would provide only 14 effective observations if the relationships of interest are estimated via panel estimators in general. As mentioned, Federico (2007) argued that pooled OLS might be appropriate with an assumption of strict exogeneity of dependent variables and we will try to ensure that given that the assumption is satisfied, by conducting various robustness checks and estimations. If the estimations of different specifications, crafted in order to provide more reliable results, show reasonable stability with respect to conclusions which can be derived from them then it is less likely that we are dealing with distorted results due to the omitted variable bias.

Nevertheless, it turns out that the estimation process will provide meaningful results even if the main estimations do not rely on generally more precise estimators than pooled OLS. For that matter, jumping ahead a bit, the main specification (1)\textsuperscript{16} is estimated with pooled OLS, fixed effects and random effects methods and a Hausman specification test is conducted. Based on the results it can be concluded that differences in the obtained coefficients from different methods are not systematic\textsuperscript{17} (pooled OLS coefficients are compared with fixed effects coefficients, fixed effects coefficients with random effects coefficients, as well as random effects coefficients with pooled OLS coefficients). In other words, the Hausman test suggests that using the pooled OLS is permitted. It has to be emphasized that this is just a suggestion from a single test that relies on certain assumptions, but still a suggestion that should increase the reliability of the obtained results.

In the next chapter the data will be inspected and the aforementioned estimations will be conducted. Results obtained will be used combined with the analysis drawn from the historiography in order to obtain general conclusions about the interconnectedness of markets in the Kingdom of Yugoslavia.

\textsuperscript{16} Exact specification (1) was used for the pooled OLS and random effects estimation. However, because of the mentioned lack of the time-variability of the variables, fixed effects estimation did not include time invariant variables, i.e. railroad distance and dummies for the market specific effects.

\textsuperscript{17} Under 5% level of significance the null hypothesis could not be rejected: that difference in coefficients is not systematic for any comparison between the models.
Chapter 4: Results

As a starting point, the simple comparison of economic integration between two city-pairs with a similar distance from one another, but with differences in ethnicity can be conducted: city pair Belgrade-Zagreb and city pair Split-Zagreb. The data at hand indicates that in the interwar period Belgrade and Zagreb were less distant from each other by railway than Split and Zagreb. In addition, there are some suggestions that the railway from Belgrade to Zagreb was of a better quality than that from Split to Zagreb, judging by the width of the railway tracks and the allowed speed (based on the data from Wiener Institut für Wirtschaftsforschung, & Wiener Institut für Wirtschafts book, 1938). If only the transportation costs are considered, one would expect that the integration between Belgrade and Zagreb should be greater than between Zagreb and Split throughout the whole period observed.

Figure 3: Integration comparison

Source: Statistical Yearbook of Yugoslavia 1918-1988 (Statistički godišnjak Jugoslavije (1918-1988))
In Figure 3 the absolute average price differences for the observed two city-pairs is depicted. The provisional conclusions that can be derived from the representation of the data in the Figure 3 somewhat defy expectations solely based on the comparison of transportation costs between these two city pairs. Throughout the whole period it seems that markets in Split and Zagreb were more integrated than the markets in Belgrade and Zagreb. The average absolute price difference was lower in town-pair Split-Zagreb than in Belgrade-Zagreb in almost all of the observed periods. Figure 3 provides convincing suggestions that transportation costs were not the main factor of integration between these city pairs, because, if they were, mainly lower absolute price differences for Belgrade-Zagreb pair than for the Split-Zagreb would be observed. One possible explanation for this, as it has been asserted, may lie in the market specific factors (for instance, Split being the port), or in the network specific factors (networks were formed more easily for Split and Zagreb which have higher estimated ethnic similarity than Belgrade and Zagreb).

This simple illustration provides motivation for us to investigate in more depth the interconnectedness of the markets in the Kingdom of Yugoslavia. The rather simple econometrical analysis which is formally depicted in the second section of this essay might provide results that could be utilized to form more precise conclusions about the relationships of interest concerning the integration of the markets in the Kingdom of Yugoslavia.

4.1 Formal analysis: Pooled OLS

In Table 2, column 1 we have depicted the results of the main estimation (1) without the variables that represent the city fixed effects. In the same table, column 2, the main results of pooled ordinary least squares estimation of specification (1) are presented. In both of these specifications, variables for rail distance and religious similarity behave as expected and in accordance with the hypothesis proposed. The coefficient for religious similarity is negative and significant, under standard statistical significance levels (1% and 5%), which suggests that city-pairs with more similar ethnic structure of the population, with respect to the religion people were practicing, have on average smaller trade costs than city-pairs with dissimilar ethnic structure of the population. In other words, city-pairs that have higher coefficient of religious similarity on
average have markets that are more integrated than the city-pairs for which this coefficient is smaller.

Table 2: Pooled OLS estimation

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Absolute price differences</th>
<th>(2) Absolute price differences</th>
<th>(3) Absolute price differences</th>
<th>(4) Absolute price differences</th>
<th>(5) Absolute price differences</th>
<th>(6) Absolute log priceratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raildistance</td>
<td>0.0428* (3.23e-05)</td>
<td>0.1573*** (4.19e-05)</td>
<td>0.1575*** (4.17e-05)</td>
<td>0.1580*** (4.15e-05)</td>
<td>0.1159*** (7.39e-06)</td>
<td></td>
</tr>
<tr>
<td>Religioussimilarity</td>
<td>-0.0885*** (0.0413)</td>
<td>-0.0682*** (0.0426)</td>
<td>-0.0680*** (0.0423)</td>
<td>-0.0671*** (0.0415)</td>
<td>-0.0615** (0.0452)</td>
<td>-0.0552** (0.0068155)</td>
</tr>
<tr>
<td>Controlling for the growth</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Controlling for the lag of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City specific variables</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>As the crow flies distance</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Control for the year 1932</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>and after</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.5310*** (0.0294)</td>
<td>0.3830*** (0.0513)</td>
<td>0.3750*** (0.0511)</td>
<td>0.4480*** (0.0516)</td>
<td>0.3520*** (0.0578)</td>
<td>0.0563*** (0.0084)</td>
</tr>
<tr>
<td>Observations</td>
<td>2.016</td>
<td>2.016</td>
<td>2.016</td>
<td>2.016</td>
<td>2.016</td>
<td>2.016</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.013</td>
<td>0.155</td>
<td>0.161</td>
<td>0.177</td>
<td>0.153</td>
<td>0.139</td>
</tr>
</tbody>
</table>

Beta coefficients presented; robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Estimations presented in columns 1 and 2, Table 2, provide us with an insight into how important is to include the city (market) specific variables in our main estimation. Not only are significance levels of the coefficient for the variables representing the railway distance and ethnic similarity different, but with inclusion of the city-specific variables we are able to explain to a greater degree the variability in our dependent variable, i.e. the variability in economic integration. Namely, in the estimation which neglects the city-specific effects, the coefficient for the railway distance is significant only on the 10% level, while when controlling for the city-specific effects it is significant on the 1% level. In addition, when city-specific variables are not included in the estimation, we are only able to explain around 1% of the total variability in the economic integration, while when controlling for city-specific effects we are able to explain around 16% of the total variability in the dependent variable which can be inferred by observing the coefficient of determination (R-squared).
It might be purposeful to conduct robustness checks in the form of estimations that would capture the certain time-varying factors that might cause distortions in the estimations if not accounted for. In order to grasp the effects of the Great Depression, which might cause biased estimations, variables for growth rates and lagged growth rates of real GDP per capita measured in 1996 Purchasing Power Parity (PPP) dollars are added (Maddison Project, 2013) to the specification (1). The growth rate of the economy might be able to reflect well enough the possible effects of the Great Depression on the key variables of interest. It seems meaningful to control for the contemporaneous effect of the growth as well as the lagged effect to capture the possibility that trade reacts slower to changes in general economic conditions (Table 2, column 3). Compared to the main estimation (column 2 in Table 2), coefficient for the religious similarity has not changed: it is still statistically significant, negative and almost the same in its level. Also the coefficients for the railway distances remained stable.

Usage of GDP growth as the approximation for the effects of the Great Depression might not be an adequate solution to the omitted variable bias problem; inclusion of growth might create possibly non-existent estimation distortions. For instance, it would not be hard to find the factors that simultaneously impact the economic growth and market integration (the degree of specialization, for instance). Thus, the inclusion of the variable for the economic growth would generate new omitted variable bias problem, which has not existed in the previous specifications that do not account for the economic growth, i.e. specifications which estimations are presented in the Table 2.

The impact of the Great Depression on the Yugoslav economy was, according to Kovačević (2015), insignificant at its outset. Kovačević identifies 1932 as the year in which the Great Depression had its biggest impact on economic activity in the Kingdom of Yugoslavia and further argues that the effects of the crises were felt until the beginning of the WWII. With respect to these assertions, inclusion of a dummy variable for the years after 1932, including 1932, in the main specification can presumably account for the effects of the Great Depression; maybe even better than the variables which used economic growth to account for the effects of the Great Depression. Column 4 of the Table 2 presents the results obtained when this variable is included in the specification (1). All coefficients of interest stay stable with respect to the results of the main estimation of the specification (1).
In the column 5 of Table 2 we have used, instead of the railway distance between city pairs, their distance “as the crow flies” in order to make sure that the results are not the consequence of the errors in measurement of the rail distance between city pairs. The coefficients of interest do not change their sign or the level of significance and the coefficient for the religious similarity does not change drastically.

As an additional stability check, another measure of the distance between prices – absolute value of the logarithm of the price ratio can be considered. Estimation results with this independent variable instead of absolute price difference are presented in Table 2, column 6. Because of the different scales, coefficients for the railroads and ethnic similarity are changed in their levels. However, they are still significant with signs which are in line with theoretical considerations and the hypothesis proposed.

The effect of the Great Depression on the variables of interest is probably not the only factor that varies through time and can distort the results if not included. We have detected the Great Depression as the most evident time-variant factor that may distort the results if neglected, but there might be others, maybe even more important factors which would lead to unreliable results if not taken into consideration. To ameliorate this problem and to further increase the confidence of the obtained results, it is possible to estimate the specification (1) with 14 dummy variables, each one of them capturing a different year in the observation period.\(^\text{18}\) This estimation would only partially resolve problems with omitted variables but it would capture the “year specific” effects which when combined with controls for market specific effect should provide somewhat more reliable results. For similar reasons, it might be pragmatic to test the robustness of the estimation of the specification (1) by including a linear trend or quadratic trend.

Estimation results of the specification (1) with time variables are presented in Table 3. Column 1 of Table 3 presents the results of the estimation of the specification (1) with year dummies, column 2 with a linear trend and column 3 with a quadratic trend. Neither of the specifications changed the overall stability of the parameters compared to the pure estimation of the specification (1) from Table 2, column 2.

\(^{18}\) Estimation is done with 13 of year specific variables in order to avoid multicollinearity.
Table 3: Pooled OLS with time variables

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Absolute price differences</th>
<th>(2) Absolute price differences</th>
<th>(3) Absolute price differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raildistance</td>
<td>0.1582*** (4.10e-05)</td>
<td>0.1578*** (4.18e-05)</td>
<td>0.1580*** (4.16e-05)</td>
</tr>
<tr>
<td>Religiosity similarity</td>
<td>-0.0678*** (0.0407)</td>
<td>-0.0674*** (0.0419)</td>
<td>-0.0671*** (0.0416)</td>
</tr>
<tr>
<td>City specific variables</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year Dummies</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Trend</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Trend Squared</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Constant</td>
<td>0.4590*** (0.0639)</td>
<td>0.4650*** (0.0535)</td>
<td>0.5740*** (0.0602)</td>
</tr>
<tr>
<td>Observations</td>
<td>2,016</td>
<td>2016</td>
<td>2,016</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.203</td>
<td>0.168</td>
<td>0.179</td>
</tr>
</tbody>
</table>

Beta coefficients presented; robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In all estimations presented above – the main estimation with all robustness checks – we have only presented the coefficients and their significance levels for the main variables of interest in order to preserve the comprehensiveness and clarity of the paper. However, it might be interesting to note that one of the control variables for city-fixed effects stands out. While all coefficients for the city-fixed effects change their statistical significance, change sign, or change in their levels when different specifications are used, the coefficient for Ljubljana, a city in Slovenia, does not change its significance or scale drastically. In every specification the coefficient for the variable representing Ljubljana is significant at 1% level and its beta coefficient is positive and varies around 0.2, meaning that on average price difference between any town from our sample and Ljubljana is higher compared to city-pairs that do not include Ljubljana. This is not surprising if we take into account that Ljubljana is the only representative of Slovenia in our sample and, as it is already mention, the Slovenian language differs the most compared to all other languages in the Kingdom of Yugoslavia. It should be recognized also that Slovenia was well connected with other observed markets (from Wiener Institut für Wirtschaftsforschung, & Wiener Institut für Wirtschafts book, 1938). It is, therefore, likely, taking the previous works in the field into account, that the language did play a role in the
formation of the trade networks, but only for Slovenia, since only the estimation of the coefficient for the city-specific variable representing Ljubljana is stable in every specification mentioned.

4.2 Inclusion of Royal Policies into the Formal Analysis

Did the royal policies designed to suppress nationalism affect the economic integration? If these policies were de facto successful in suppressing the dominant nationalistic ideology then one would expect the increasing formation of “multi-ethnic” trade networks or empowerment of existing trade networks and, therefore increased market integration among Yugoslav regions. Estimation wise, this would mean that the coefficient for the religious similarity should be larger (smaller in absolute value) and/or insignificant for the duration of the policy of “integrated Yugoslovenism”.

The estimation results presented in Table 4 imply that royal policies were not able to stop economic nationalism with respect to economic integration. Moreover, these policies could be counterproductive and may have enhanced the barriers to formation of “multi-ethnic” networks.

Before 1929, the year in which the royal measures were introduced, ethnic similarity did not have statistically significant effects on economic integration; estimated coefficients for religious similarity are not significant (Table 4, column 1). During the period when policies were active (1929-1934), the estimated coefficient for religious similarity is statistically significant and negative (Table 4, column 2). Based on the results from these two estimations it can be concluded that the ethnocentric ideology started to significantly impact market integration in the Kingdom of Yugoslavia only after the royal measures were introduced, i.e. after 1929. If there was no significant impact of ethnicity on market integration before the year 1929, but there was a negative and significant impact after 1929, it might be the case that a significant rise in the ethnocentric ideologies destroyed some existing “multi-ethnic” networks. Such a conclusion is rather peculiar due to the fact that from 1929 onwards royal policies aimed at fostering Yugoslav national unity were implemented.

---

These are the estimations of the specification (1) for the specific time periods within the time frame observed.
Table 4: Pooled OLS with Policy Impact

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Before 1929 Absolute price differences</th>
<th>(1929-1934) Absolute price differences</th>
<th>(1929-1934) Absolute price differences</th>
<th>After 1934 Absolute price differences</th>
<th>(Non-dictatorship years) Absolute price differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail distance</td>
<td>0.2360*** (8.68e-05)</td>
<td>0.1627*** (6.27e-05)</td>
<td>0.1623*** (6.21e-05)</td>
<td>0.0700 (6.82e-05)</td>
<td>0.1532*** (5.53e-05)</td>
</tr>
<tr>
<td>Religious similarity</td>
<td>0.0478 (0.0975)</td>
<td>-0.0911** (0.0654)</td>
<td>-0.0823* (0.0800)</td>
<td>-0.1428*** (0.0610)</td>
<td>-0.0515 (0.0556)</td>
</tr>
<tr>
<td>City specific variables</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Control for the year 1932</td>
<td></td>
<td></td>
<td></td>
<td>-0.1219** (0.0403)</td>
<td></td>
</tr>
<tr>
<td>and after</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control for the year 1932</td>
<td></td>
<td></td>
<td></td>
<td>-0.0231 (0.0978)</td>
<td></td>
</tr>
<tr>
<td>and after* Religious</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>similarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.4980*** (0.116)</td>
<td>0.3320*** (0.0762)</td>
<td>0.3650*** (0.0778)</td>
<td>0.4060*** (0.0827)</td>
<td>0.4200*** (0.0685)</td>
</tr>
<tr>
<td>Observations</td>
<td>432</td>
<td>864</td>
<td>864</td>
<td>720</td>
<td>1,152</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.103</td>
<td>0.213</td>
<td>0.233</td>
<td>0.199</td>
<td>0.127</td>
</tr>
</tbody>
</table>

Beta coefficients presented; robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

If one were to form the conclusions based only on hitherto discussed results, it would be easy to claim that royal policies were counter-productive. However, it needs to be taken into account, before such a conclusion is arrived upon, that the estimated results for the years when the policies were not yet active do not constitute a valid counterfactual. If there was a factor which operated contemporaneously with royal policies and that factor was not the result of the policies then it is still possible that policies somewhat reduced the impact of nationalism on market integration. It can be the case, as it is going to be shown, that within the years when the royal measures were active other forces strengthened nationalism.

When the effects of the Great Depression are controlled for by the inclusion of a dummy variable for the post 1932 period and the interaction of that variable with the measure of ethnicity is tested, see specification (1), it is clear that the conclusions about the effects of royal policy are not that straightforward as afore discussed. Results from Table 4, column 3, suggest that during
the period of active anti-nationalistic policies, the Great Depression\textsuperscript{20} was also responsible for the increase in the significance of the impact of ethnicity on market integration. Included controls for the impact of the Great Depression yield results which decrease the significance of the coefficient for religious similarity (now significant only at a 10\% level) suggesting that the sudden increase in the significance of the ethnicity with respect to market integration was not only due to the measures imposed by the King (if these measures increased ideological impact at all) but also due to the other factors which supported the rise of nationalistic ideology.

During the period of 1934-1939 it seems that the impact of ethnicity on market connectedness was the largest in level and statistical significance, compared to the other periods from this sample. Results of the estimation for the after-policy period (1934-1939) are depicted in Table 4 column 4. It might be interesting to note that after 1934, the coefficient for religious similarity are for the first time larger in scale than the coefficient for the railway distance between markets/city-pairs.

In Table 4, column 5, the estimation results of the specification (1) for the years that were formally not covered by royal policies are presented.\textsuperscript{21} During these years, which were not under the influence of the policy of “integrated Yugoslovenism”, the coefficient for religious similarity is not significant under acceptable statistical levels.

Taking the above mentioned into account we can confirm the results from previous studies for the case of Yugoslavia: the ideological state of affairs of a given country or region (namely, rising nationalism) does matter when it comes to economic integration. Furthermore, we can infer that the policies from 1929 crafted to deter individuals supporting an ethnocentric ideology, despite the extreme measures undertaken, were not able to completely destroy the impact of nationalism on economic integration. It is not clear though whether or not these policies had any effect on economic nationalism and which was the direction of that effect if it existed. Weak suggestions exist that these measures were counter-productive, but since it is not possible to completely isolate the pure effect of the policy, such a claim cannot be treated as particularly convincing.

\textsuperscript{20} Besides the Great Depression, in the same period the rise of nationalism elsewhere in the European polity could have also strengthened the nationalistic ideology, indeed, this would seem likely.

\textsuperscript{21} Pooled data for years 1926, 1927, 1928, 1935, 1936, 1937, 1938 and 1939 were used for this estimation
It could be the case that the forces, such as the Great Depression, which fostered nationalism, were very strong and that policies from 1929 on actually ameliorated the effects of these forces, although they were not able to completely wipe out the effect of these forces. This argument could be made with respect to the results which show the greatest impact of the ethnicity on economic integration after 1934 when these policies were abandoned. However the case could also be made that nationalistic sentiments were built up, that both policies and forces such as the Great Depression were preventing or even destroying the “multi-ethnic” network formation. This would imply that the estimated effects after the measures were abandoned (1934-1939) are depicting the cumulative effect that were growing through the years of the counter-productive policies and other forces that encouraged ethnocentrism.
Chapter 5: Conclusions and Final Remarks

The results presented in this paper suggest that ideology in the form of nationalism did play a role in the market integration processes in the Kingdom of Yugoslavia. Estimations presented provide meaningful results with respect to the theoretical and historical considerations. Economic nationalism mattered in the Kingdom of Yugoslavia and not just in terms of slowing down the integration process, rather some results even suggest that rising ethnic nationalism actively disrupted and even destroyed pre-existent trade networks which existed/were formed between different ethnicities.

Markets in the Kingdom of Yugoslavia were not able to integrate to a point that would generate costs of conflict high enough to prevent the military conflict. Market integration was, it seems, slowed down by nationalistic ideologies despite the very favorable institutional conditions for integration. Therefore, nationalism not only gave rise to a political environment that would set different ethnic groups on opposing sides during World War II but also inhibited the creation of an economic environment that was conducive to peace. Results generated suggest that it is not enough to establish formal institutions fostering multi-ethnic trade in order to increase the cost of war to the point which would prevent military conflict. Prevalent ideologies should support these institutions and time needs to pass in order for the trade networks to be established and preserved so that economic integration achieves the level which makes the costs of military conflict high to the level which makes war economically undesired. In addition, we have provided some suggestions that even if the multi-ethnic trade networks are formed, if not supported by prevalent ideologies they can easily be destroyed.

In this context of rising nationalism not even the extremely strict policy of the royal dictatorship was able to prevent ethnocentric ideology. The findings of this paper cast reasonable doubt on the efficacy of the policies intended to suppress nationalism and foster Yugoslav national unity, suggesting that these policies proved unable to suppress the rise of strong ethno-nationalist ideological tendencies.

At the present time, the European Union is actively engaged in an ongoing discussion focused on the creation of a common European identity (Miller, 2012; Shore, & Black, 1994;
Close examination of the policies established by King Aleksandar Karadžorđević’s royal decrees can provide instructive insights that contribute to the discussion of these issues and policy-making decisions designed to create a common European identity. Since it might be the case that Aleksandar Karadžorđević’s decreed policies negatively affected the economic integration of the Kingdom of Yugoslavia and, in fact, greatly contributed to its dissolution, or were completely ineffective in attempts to modify and/or alter the prevalent ethnocentric ideology of Yugoslav “member-states,” it is extremely important to evaluate and critically examine the particular royal policies that produced unintended long-term consequences for the Kingdom of Yugoslavia. Insights from such examinations could possibly improve the policies intended to create a unified European identity. Lessons from the Kingdom of Yugoslavia suggest that the answers to rising nationalism are probably not to be found in the extreme policies intended to create a unified ethnic sentiment by force. If the European Union becomes faced with rising nationalism – and it can be argued that it is already facing considering the rise in popularity of the right-wing political movements and parties in some countries – the aforementioned policies might be ineffective, or even produce the unintended consequences such as: reduce economic integration. However, this conclusion is only based on the observation of the Kingdom of Yugoslavia and the question remains open over how and to what extent the conclusions from the historical events in the Balkans can be extended to today’s global state of affairs. Regardless, in the light of the results from this study, it could be dangerous to completely disregard the possible implications of policies intended to alter national sentiments.

Ideology, not just formal institutions, matters in economic integration processes.
References


McCloskey, Deirdre (2015) ‘It was Ideas and Ideologies, not Interests or Institutions, which Changed in Northwestern Europe, 1600-1848’, Journal of Evolutionary.


Missiaia, A. (2009). Regional market integration in Italy during the unification (1832-1882).


Primary Sources

Group of authors. Sto godina železnica Jugoslavije 1849-1949 (1951). Jugoslovenske železnice

Statistical Office of the Republic of Serbia
