

FROM DIVERSITY TO HOMOGENIZATION - THE RISE AND DECLINE OF ETHNIC FRACTIONALIZATION IN SERBIA

DOI:

UDC: 314.117.018:316.344-054(497.11)

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ABSTRACT

Research on the ethnic composition of population is gaining increasing importance in many countries, particularly in the context of immigration countries that often receive ethnically diverse populations. In contrast, countries facing negative demographic trends, such as emigration, low fertility rates, and advanced population ageing, frequently experience a decline in ethnic diversity and a shift toward ethnic homogenization. The analysis is based on census data used to calculate the Ethnic Fractionalization Index to identify current trends in ethnic diversity in Serbia. The results indicate that the population of Serbia is undergoing a reduction in ethnic diversity, reflecting a deepening process of ethnic homogenization due to unfavorable demographic processes. The significance of this study lies in its relevance for minority policy development and for a broader understanding of the position of minority communities within society, particularly in the context of long-term demographic change.

Keywords: Ethnic fractionalization, ethnic diversity, Serbia, homogenization, ethnic fractionalization index

INTRODUCTION

Although many scientists once assumed that the question of ethnicity in contemporary societies would become obsolete, recent trends suggest the opposite. The analysis and collection of data on ethnic affiliation remain a central feature of many societies of the world and support for this hypothesis has become increasingly prevalent in recent literature [1], [2]. Ethnic structure represents a key dimension of social heterogeneity. Ethnically diverse societies often face significant challenges in fostering social cohesion among different ethnic groups, as well as concerns regarding whether such diversity may contribute to broader social and political instability. In addition to managing interethnic relations, ethnically diverse states also confront issues of economic cohesion, especially in relation to the social position of ethnic communities, the presence of discrimination or inequality, which is important for formulation of minority and other public policies.

Most contemporary research examines ethnic diversification from the perspective of developed countries, particularly those characterized by high levels of immigration [3], [4], [5], [6], [7], [8]. A dominant focus of this literature is the impact of ethnic diversity on the socio-economic development of states [10], [4], [9], [11]. In addition, a substantial body of research addresses the relationship between ethnic diversity and political processes, including democratic stability [12], [13], [14]. Only a limited number of studies examine the role of ethnic diversity in less developed or developing regions [15],

[16], [10], [17]. The smallest share of research focuses on regions characterized by emigration processes and persistently negative demographic trends. This gap is particularly evident in the Balkans, where research on ethnic diversification and its dynamics remains scarce [18]. This issue is especially relevant in the context of Serbia, a country marked by long-term negative demographic trends and a declining population over recent decades due to low fertility rates, negative natural increase, sustained emigration, and deepening population ageing [19]. In addition, it is important to note that Serbia is a multi-ethnic, multi-confessional and multilingual country. Overall, this raises an important question: how do negative demographic trends affect general ethnic diversity in the country? Given the region's complex historical heritage, this question is of particular significance.

Ethnic fractionalization, which lies at the core of this study, is most measured using census data. However, the use of census statistics entails significant methodological limitations, including frequent changes in classification and nomenclature on national affiliation, shifts in ethnic categories, variations in self-declared ethnic affiliation, and overall data volatility, both statistically and in terms of the inclusion or exclusion of specific categories across census rounds [20], [21], [22]. These factors reduce the reliability of ethno-statistical data and require caution in their application. This is especially important given that ethno-statistics constitute the primary quantitative basis for the formulation of minority policies [22].

The main objective of this paper is to analyze long-term trends in the ethnic fractionalization index, which represents one of the most widely used measures of ethnic diversity [23], [24], in Serbia from 1948 to 2022. In addition to analyzing changes in ethnic fractionalization across successive censuses, the study explores the underlying drivers of these transformations and identifies the key demographic and socio-political factors that may have influenced them. In this way, the paper contributes to a deeper understanding of the complex processes shaping the decline of ethnic diversity in this region, particularly within developing regions characterized by adverse demographic trends, that have remained underrepresented in the existing literature. Beyond its academic contribution, the findings of this study also have practical relevance, as they may serve as a foundation for the more informed design and implementation of minority policies.

LITERATURE REVIEW

As previously noted, ethnic diversity represents a highly dynamic component of population dynamics, with a major methodological challenge arising from the definition and categorization of ethnic or, in some cases, racial affiliation, depending on the focus of the research. It is widely recognized that no universal definition of ethnicity exists, resulting in clear limitations in its conceptualization and in the interpretation of related data. Ethnic affiliation is therefore most understood through its multidimensional nature, as it does not constitute a static attribute but rather forms part of an individual's broader identity [25], which is very important for implication of understanding ethnic diversity. As a result, a central question in many studies of diversity concerns the impact of ethnic fractionalization and ethnic polarization on a country's overall development, as well as the conceptual distinction between these two phenomena and the appropriate methods for measuring diversity. The Ethnic Fractionalization Index captures the degree of "fragmentation" within a system, whereas polarization indices measure the distance

between two distinct groups, often conceptualized as opposing extremes, within that system. In recent years, increasingly sophisticated measures of ethnic diversity have emerged that move beyond these two traditional approaches [26], [27], [27], [28].

Apart from papers which are focused on measuring diversity, a substantial body of research has focused on examining how ethnic fractionalization and polarization affect economic development. Empirical findings usually suggest a positive correlation between higher levels of ethnic fractionalization and slower economic growth. According to these studies, more ethnically fragmented states tend to exhibit lower GDP per capita and weaker overall economic performance, largely due to reduced social cohesion arising from many ethnic groups in the country [29]. This erosion of social cohesion negatively affects the functioning of state institutions. Ethnically heterogeneous societies more frequently face lower-quality public goods and services, often as a result of institutional distrust, inadequate integration frameworks, segregation, and high levels of discrimination. Consequently, the adverse economic effects of ethnically fragmented societies are most manifested through the insufficient performance of institutions and their limited capacity to respond to the needs of ethnically diverse populations [10], [4], [5], [30].

More recent studies increasingly emphasize a positive relationship between ethnically diverse societies and economic development, particularly in the context of ethnic fractionalization. Ethnic diversity is progressively viewed as a potential resource, as heterogeneous societies may foster innovation and strengthen market dynamics. This perspective is especially relevant for enhancing institutional capacity in ethnically diverse environments. Some studies conclude that such societies increase the adaptive capacity of their economies and contribute to long-term economic sustainability. In contrast, ethnic polarization is more frequently identified as a dimension of diversity that negatively affects economic development [9], [7], [11], [31]. An important conclusion emerging from this literature is that ethnic diversity per se does not constitute a developmental obstacle, rather, its economic effects are contingent upon the political system. Democratic regimes tend to be more successful in channeling ethnic heterogeneity in productive ways, whereas authoritarian systems often experience increased corruption in the presence of diversity and ethnic fractionalization [32].

In addition to economic outcomes, a recurring theme in the literature concerns the impact of ethnic diversity on political stability. A common hypothesis suggests that ethnically fractionalized societies are more prone to ethnic conflict and to racial, religious, or ethnic intolerance between groups. Many studies find that higher levels of ethnic fractionalization are positively correlated with increased political fragmentation. At the same time, the effects of ethnic diversity on democratic systems are multidimensional and cannot be readily characterized as inherently positive or negative. Moreover, numerous studies emphasize that linguistic, ethnic, and religious diversity may exert distinct influences, resulting in different democratic outcomes. A large portion of the literature suggests that where adequate democratic mechanisms are in place, stability can be maintained even in diverse societies, whereas weak institutional responses to pluralism constitute a major impediment. Thus, in highly democratic societies, diversity does not necessarily hinder development and may even reinforce democratic stability, however, deep societal polarization remains a key destabilizing factor [12], [13], [33], [34].

A number of studies focusing on less developed or developing regions conclude that high levels of ethno-linguistic diversity negatively affect socio-economic and political development [17], [35]. More recent research, however, challenges this interpretation,

arguing that the root causes of conflict and civil war in such regions are more often linked to unstable political systems, underdeveloped economies, and weak institutions rather than to ethnic or linguistic heterogeneity itself [16], [36]. Accordingly, ethnically diverse societies can achieve substantial economic progress under appropriate socio-economic and politically stable conditions [37], [38], [39].

As previously highlighted, a significant research gap remains regarding the study of ethnic diversity and ethnic fractionalization, particularly in the context of multiethnic regions such as the Balkans. This indicates considerable scope for expanding the discussion on ethnic fractionalization in regions characterized by demographic stagnation and decreasing diversity. One of the studies concludes that there is no direct correlation between the number of ethnic groups, the degree of societal fractionalization, and either economic or democratic stability, instead, the decisive factor lies in the capacity of political institutions to adapt to the specific organizational patterns of heterogeneous societies [40]. Similarly, research on the Western Balkans points to the absence of a clear and direct relationship between ethnic diversity and economic performance, suggesting that ethnic heterogeneity does not automatically result in poorer economic outcomes [41]. As follows, relatively few studies focus on demographically stagnant regions that are transitioning from ethnically heterogeneous to more homogeneous societies [18], while the majority of existing research concentrates on highly immigration-driven countries, where rising diversity is primarily shaped by the inflow of ethnically diverse migrant populations.

METHODOLOGY

The Ethnic Fractionalization Index, as a measure of ethnic diversity, originated in the early 1960s in the Soviet Union and was published in the Atlas Narodov Mira in 1964. It was conceptualized as an ethnolinguistic variable, calculated as one minus the Herfindahl–Hirschman Index of the shares of ethnolinguistic groups. This index represents the probability that two randomly selected individuals from a population belong to different ethnic groups [23], [24]. It is important to emphasize that such measures of ethnic diversity have inherent limitations, primarily because they often treat ethnic affiliation as a static component and fail to account for the fluidity of ethnic identity. As a result, they tend to overlook changes in ethnic modalities or in the classifications of national affiliation and consequently, data variability [42].

In this study, the ethnic fractionalization method is used through the calculation of the Ethnic Fractionalization Index, which indicates the degree of population homogenization or heterogenization by ethnic affiliation. The index is based on the population share of each ethnic group within the country and relies as previously mentioned on the Herfindahl–Hirschman concentration index (HHI), widely applied in economics. The Ethnic Fractionalization Index is calculated as follows:

$$EF_{ct} = 1 - \sum_{i=1}^n S_i^2$$

Where EF_{ct} denotes the level of ethnic fractionalization in country c at time t , and S_i represents the share of the population in unit c belonging to ethnic group i ($i = 1, \dots, n$) at time t . The values of Ethnic Fractionalization Index ranges from 0 to 1. If the index is closer to 1, it indicates a more ethnically heterogeneous population, or contrariwise, if the

index is closer to 0, it indicates a more ethnically homogeneous population of a country. The period analyzed in this study covers Ethnic Fractionalization Index levels from 1948 to 2022, based on census statistics for the entire territory of Serbia.

The reliance on subjective self-identification of nationality in population censuses has become an important source of methodological constraints. This approach has resulted in shifts in ethnic classification frameworks and the emergence of phenomena such as ethnic mimicry, ethnic concealment, and so-called “floating ethnic groups,” referring to individuals who repeatedly alter their declared national affiliation [42]. Such dynamics further complicate the analysis of demographic processes and the consistent classification of minority populations. Consequently, certain ethnic communities exhibit reduced data reliability due to pronounced variability in census reporting [20], [21], [22]. Census data therefore frequently reveals inconsistencies between self-declared ethnic identity and officially recorded classifications, representing a substantial challenge for the advancement of ethno-demographic research. This paper includes all ethnic communities (along with their respective shares of the total population) for which data was published in official census statistics.

RESULTS

The most dominant trend observed throughout the entire intercensal period is the almost continuous increase in the share of Serbs within the total population. Following an initial decline during the 1980s, the proportion of Serbs recorded a sharp increase up to the 2011 census. The most recent census, however, indicates a slight decrease in their overall share. Many ethnic communities exhibit a continuous decline in their population shares, including Bulgarians, Bunjevci, Hungarians, Romanians, Ruthenians, Slovaks, Slovenes, and Croats. In contrast, Bosniaks and Goranci represent the only two ethnic groups that recorded a consistent increase over time.

The most pronounced decline was observed among Albanians, whose share of the total population decreased by nearly 13% between 1981 and 1991. The latest census, however, suggests a very modest revitalization of their population share. The peak of Yugoslav identification occurred during the 1980s, reflecting the period of strongest identification with the former state, during which the number of individuals declaring themselves as Yugoslavs reached its highest level. The subsequent weakening and dissolution of Yugoslavia were indirectly reflected in changes in national self-identification, leading to a sharp decline in the share of Yugoslavs.

Similar to Yugoslavs, the shares of Montenegrins and Macedonians followed a comparable trajectory, increasing up to the censuses of the 1980s and 1990s, after which followed a decline. Particularly non-specific patterns of population dynamics are observed among Roma and Vlachs, who are often characterized as “floating ethnic groups” [42], as they frequently change their declared national affiliation between censuses. This results in highly variable data that are often difficult to interpret from a demographic perspective, making it challenging to identify clear and consistent demographic trends.

These dynamics inevitably influenced the trajectory of the Ethnic Fractionalization Index, which increased until 1981, indicating a rise in the level of ethnic heterogeneity in Serbia. This was followed by a sharp decline in the index, after a period marked by substantial political and historical transformations, as well as civil war, culminating in the dissolution of Yugoslavia. That suggested the onset of ethnic homogenization in Serbia. The most

recent census recorded a slight increase in the Ethnic Fractionalization Index. It is important to note that several factors contributed to these observed trends.

Table 1. Percentage share (%) of each ethnic group in the total population according to the censuses from 1948-2022

	1948	1953	1961	1971	1981	1991	2002	2011	2022
Serbs	73.89	73.83	74.65	71.23	66.38	79.93	82.86	83.32	80.64
Albanians	8.15	8.1	9.16	11.66	13.99	1	0.82	0.08	0.93
Bosniaks	0	0	0	0	0	0	1.81	2.02	2.31
Bulgarians	0.91	0.86	0.77	0.64	0.36	0.34	0.27	0.26	0.19
Bunjevci	0	0	0	0	0	0.27	0.27	0.23	0.17
Vlachs	1.43	0.4	0.02	0.17	0.27	0.23	0.53	0.49	0.32
Goranci	0	0	0	0	0	0	0.06	0.11	0.12
Yugoslavs	0	0	0.26	1.47	4.75	4.09	1.08	0.32	0.41
Hungarians	6.64	6.33	5.88	5.09	4.19	4.39	3.91	3.53	2.77
Macedonians	0.27	0.39	0.47	0.51	0.53	0.58	0.34	0.32	0.22
Muslims	0.27	1.16	1.22	1.83	2.31	2.3	0.26	0.31	0.2
Germans	0.64	0.66	0.19	0.11	0.06	0.07	0.05	0.06	0.04
Roma	0.8	0.84	0.13	0.59	1.19	1.21	1.44	2.05	1.98
Romanians	0.97	0.86	0.78	0.68	0.58	0.54	0.46	0.41	0.35
Russians	0.2	0.11	0.09	0.06	0.03	0.03	0.03	0.05	0.16
Ruthenians	0.35	0.34	0.34	0.24	0.21	0.23	0.21	0.2	0.17
Slovaks	1.12	1.08	1.02	0.91	0.79	0.85	0.79	0.73	0.63
Slovenians	0.32	0.3	0.26	0.19	0.13	0.1	0.07	0.06	0.04
Turks	0.03	0.78	0.58	0.22	0.15	0.01	0.01	0.01	0.01
Ukrainians	0	0	0	0.07	0.06	0.06	0.07	0.07	0.06
Croats	2.6	2.48	2.57	2.19	1.6	1.24	0.94	0.81	0.59
Montenegrins	1.15	1.23	1.37	1.48	1.58	1.52	0.92	0.54	0.3

Source: SORS (1948-2022). Census statistics, National affiliation

The most dominant factor underlying the reduction in ethnic heterogeneity is demographic in nature, particularly the impact of unfavorable demographic processes such as persistently low fertility rates, long-term outmigration, and pronounced population ageing. Numerous ethnic communities have experienced sustained negative demographic trends and an overall decline in population size, while only a very limited number of ethnic groups recorded population growth.

In addition to demographic factors, political and ideological influences have played a significant role, most notably reflected in the sharp rise and subsequent rapid decline. One of the examples is the rapid rise and decline in the share of individuals identifying as Yugoslavs following the emergence and then dissolution of Yugoslavia. The abrupt decline of the German population was likewise the result of their politically driven emigration from Yugoslavia, particularly from the territory of Vojvodina after the Second World War [43]. Furthermore, the significant decrease in the Turkish population resulted from interstate agreements between Yugoslavia, Greece, and Turkey, which facilitated intensified emigration flows until the 1970s. These movements predominantly involved the emigration of the Turkish population, as well as members of other national communities of Islamic faith from Yugoslavia [44].

The sharp decline in the Albanian population share is attributable to a specific political context, rendering census data increasingly limited after the 1991 census. The Statistical Office of the Republic of Serbia was unable to conduct population censuses in Kosovo and Metohija in 2002, 2011, and 2022, while a substantial proportion of the Albanian population boycotted the 1991 census. A similar issue is observed in the municipalities of southern Serbia (Bujanovac and Preševo), where census data from 1991 and 2011 remain incomplete due to census boycotts by the Albanian population [45].

Finally, the methodological limitations previously discussed significantly constrain the accurate assessment of the population shares of Roma and Vlachs, due to pronounced fluctuations in their population dynamics.

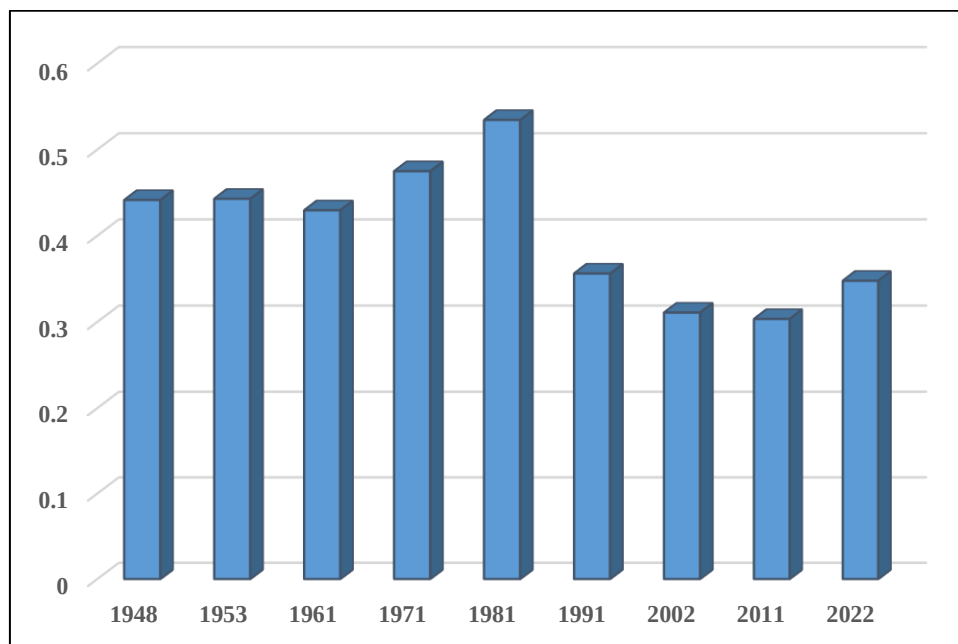


Figure 1. Changes in the level of Ethnic Fractionalization Index, 1948-2022

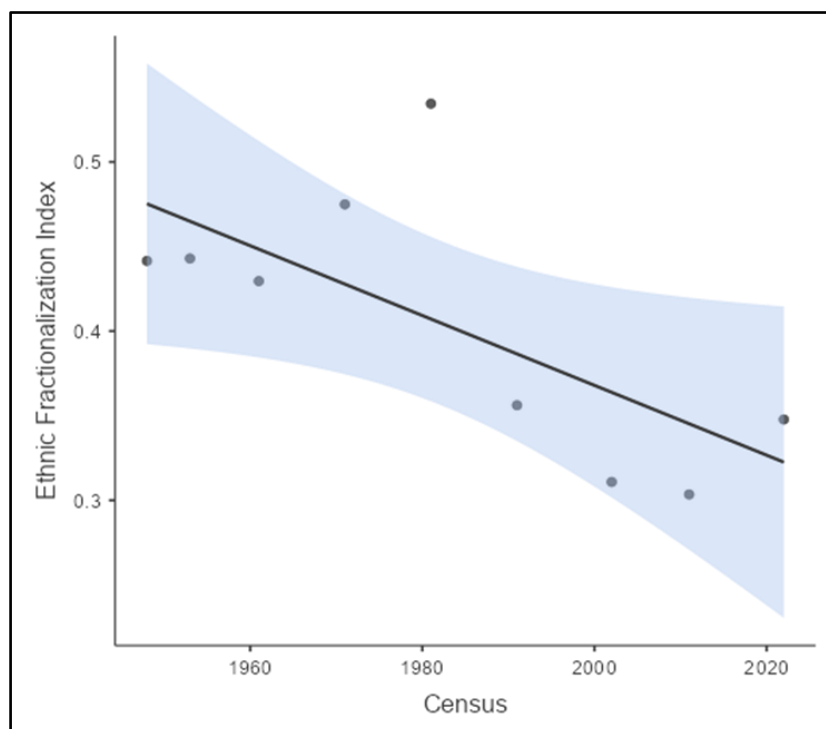


Figure 2. Scatterplot with linear regression showing an overall decrease in Ethnic Fractionalization Index

It is particularly noteworthy that the number of recorded ethnic communities increased continuously from census to census, reaching 44 identified ethnic groups in the 2022 census. However, despite this growing numerical diversity, the population shares of many ethnic groups either stagnated or declined over time. As a result, overall ethnic diversity first stabilized and subsequently decreased, leading to a further intensification of ethnic homogenization within the country due to the influence of demographic and socio-political factors.

DISCUSSION AND CONCLUSION

This study demonstrates that the Ethnic Fractionalization Index in Serbia has undergone substantial changes over time, highlighting once again the dynamic nature of ethnic diversity. Ethnic structure is not a one-dimensional phenomenon, rather, it is shaped by the interaction of demographic, socio-political, and other contextual factors. After a nearly continuous increase up to 1981, the index experienced a pronounced decline, indicating a shift from ethnic heterogeneity toward increasing ethnic homogenization of the population. The transformation of the Ethnic Fractionalization Index over the period from 1948 to 2022 can, on the one hand, be attributed to genuine demographic processes. Many ethnic communities recorded a persistent decline in their population shares, primarily because of long-term low fertility rates, low or negative natural increase, sustained emigration, and pronounced population ageing.

On the other hand, for certain ethnic groups, the observed changes were also influenced by factors of a methodological or political nature, including frequent shifts in self-declared national affiliation and changes in census classifications and methodologies. Although not the central focus of this paper, it is important to note that some ethnic communities exhibited high variability in their population size across censuses, characterized by unstable population trends and abrupt fluctuations that lack clear

demographic explanations. This is particularly relevant in the context of so-called “floating ethnic groups” and phenomena of ethnic mimicry. Such sudden changes in population dynamic, sharp increases or declines in the population shares of specific groups, can substantially affect the values of the Ethnic Fractionalization Index. Consequently, the results derived from this index must be interpreted with caution, considering its sensitivity to underlying methodological issues.

While previous studies have primarily focused on the outcomes and consequences of ethnic diversity, this research contributes to literature by critically examining the temporal stability and data quality underlying measures of ethnic fractionalization. Changes in ethnic fractionalization may reflect not only genuine demographic transformations but also shifts in classification practices and patterns of self-identification. The findings indicate that ethnic categories are not necessarily stable over time, a tendency that is particularly pronounced in post-conflict and post-socialist societies. This instability limits the explanatory and analytical utility of ethnic fractionalization measures and calls for caution in their application and interpretation.

Furthermore, any analysis of these results must acknowledge the significant methodological constraints involved in constructing and interpreting the Ethnic Fractionalization Index for Serbia, including data variability, incomplete statistical coverage, and inconsistencies in census data. Overall, this study demonstrates that ethnic fractionalization is not a purely statistical construct, but a composite outcome shaped by census methodology, socio-political situations, self-identification dynamics, data quality, and specific demographic processes. Consequently, the interpretation of long-term trends in ethnic diversity requires a context-sensitive and cautious approach, particularly when such indices are employed in broader socio-economic and political analyses. Finally, the findings underscore the need for further research focusing on societies experiencing prolonged demographic decline and transformation from ethnically heterogeneous to increasingly ethnically homogeneous spaces.

ACKNOWLEDGEMENTS

The work was supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia (Contract number 451-03-34/2026-03/200091).

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