

THE PERCEIVED VALUE OF MONEY IN BOSNIA AND HERZEGOVINA: DO WE PERFORM BETTER THAN IN 80ies AND HOW TO MEASURE IT

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Abstract

The paper aims to provide scientific insight into citizens (and even some public sector officials) perception of 80s (often referred as pre-war time) as economically wealthier period than the recent one. This perception seems not to be grounded on empirical data and findings, but rather led by subjective view and emotional tights to “good old times”. Citizens’ perceived value of money and subsequently perceived quality of life may not be a subject of discussion as it may be subjective and individualized and not necessarily based only on economic values and normative benchmarks. But the economic value of money may be used to identify deviations from normative benchmarks and therefore to differentiate from subjective perceptions and real economic value of money.

Comparison of two periods is rather complex due to the different political and economic system, different administrative set up of the country, different structure of spending by households, availability of certain products, foreign trade regime, available statistics etc. Therefore, analysis is limited to data available for both periods and collected under consistent methodology. Available data enabled comparison of essential goods and to some extent other goods needed for households.

In terms of affordability of essential and basic goods the findings are rather opposite to the overall perception. Authors have conducted out comprehensive analysis of legal and regulatory framework as well as analysis of real economic value of money today in comparison to the 80ies. The comparative analysis of legal and regulatory framework shows that current legal and regulatory framework has much more favourable mechanisms of protection than the regulations back in 80s. It refers to the consumer protection, labour rights, mechanisms of price controls, protection of citizens from inflation effects, supply of loans. The real value of money has been tested by comparative analysis of prices of selected goods (mainly essential goods) and wages. The results show that employee with average wage today could afford much more goods then back in 80ies and spend much less of its wage on basket of essential goods.

As the legal and regulatory framework and purchase power of average wage are rather „hard“ facts, it may be concluded that the perception of „good old times“ in so called “pre-war time” is not grounded in legal and economic rationale, but is rather subjective.

Keywords: *Value of Money, Legal and regulatory framework, Comparative analysis*

1. INTRODUCTION

The choice of research topic is driven by the need to have empirical checks on the overall perception of the BiH citizens that 80s were much wealthier period than nowadays. Citizen's purchase power, as well as their rights are complex social, legal and economic issue and while citizens have a right to have subjective view, economists and lawyers, regardless the side they take in public policy dialogue (public, private, non-government sector, academia) should use scientific methods to draw conclusions.

In late 80s, countries in Eastern and Central Europe passed through comprehensive dual transformation. At the same time, political system has been shifted from state control to democracy while economic system passed transition from planned to market economy.

At the time when transformation began Bosnia and Herzegovina was still part of ex-Yugoslavia and reforms started in 80s were not completed due to dissolution of Yugoslavia and destroying war with significant effects on population, political and state system, and economy. All these significant events had negative impact on the society and economic development of Bosnia and Herzegovina. While it is not possible to exclude the impact of post war recovery, administrative set up (in)efficiencies as well as subjective perceptions of citizens in terms of safety and freedom, for example, the analysis based on "hard" facts may provide useful input to better understand the difference between two periods on objective way.

Therefore, authors have defined two research questions:

1. Is economic value of money in Bosnia and Herzegovina higher now or in 80ies (pre-war period)?
2. Is the legal and regulatory framework more favourable now, in terms of regulations, access to finance and supply of goods and services?

The objective of this paper is to compare economic and legal framework in 1990 and 2020, aiming to identify major differences. The paper does not deal with impact of "soft" factors, but rather trying to identify any facts and rationale for overall perception of 80ies as "good old time".

Having in mind significant difference between these two periods such as for example high inflation in 80s versus fixed exchange rate in post-war period, as well as differences in political and administrative system, the methodology applied is simple to allow for meaningful outcomes. The major constraints in comparing two periods are data availability, methodology of data collection and disclosure, as well as the structure of households spending. Data availability and methodology constraints have impact on scope of the research, as only goods and services with data available in both periods may be compared. It resulted in selection of essential goods as primary focus of this research. At the other side, structure of spending disposable income by households must be considered in interpreting results of the research. For example, costs of vacation were non-existent in 80ies as state owned companies had they own

facilities at the coast where employees could take vacation at no cost or by paying symbolic prices. As of today, the costs of vacation are significant for average household as full price must be paid by households. The same apply for rent costs, as in 80ies after certain period of work in a company employee would be entitled to get a flat, or housing loan from in-house bank at very favourable conditions. Today, significant share of disposable income is spent on rent or housing loan instalments.

Based on the results of this research, valuable policy implications and recommendations can be derived and used as an example how evidence-based approach may contribute to overall quality of public policy dialogue. Demystifying biases and perceptions leads to integrity and better trust between policy makers and citizens.

The paper is organised in five sections. After introduction, which is considered as Section 1, Section 2 provides relevant literature review on political and economic context. Section 3 presents model specification and the methodology, including data selection and description. Section 4 presents results of analysis and finally Section 5 summarizes conclusions.

2. LITERATURE REVIEW

The economic system in Yugoslavia was unique. It was not centralised state planned economy as in majority of Eastern Europe countries; neither was it a market economy as in Western Europe. Some authors refer to the system as “indirectly controlled market economy” or “market socialism” (Strohm, n.d., Liotta, 2008). This is probably the best explanation of hybrid system, which included some mechanisms of state planning and some of market economy.

Extremely high growth of internal and external imbalances in 60s and 70s resulted by economic crisis in 80s. The oil crisis has contributed to rise of external debt of Yugoslavia from 2 billion USD in 1970 to 18 billion USD in 1980 (Stanev, 2018, Uvalić, 2018). The high fiscal deficit caused reclaim of funds by lenders in 80s and triggered economic crisis, massive devaluation of the currency, state insolvency, rise of unemployment rate and overall decrease of living standards (Anderson 1995, Calic, 2017). Because of Yugoslav economy recession, GDP growth in 80s was as low as 0.6 p.a., real net wages decreased by 40% and inflation got its peak in 1989 as high as 2000% (Calic, 2017, Strohm, n.d.).

The high rise of debt has not been caused by central state borrowing, but rather by uncontrolled borrowing by Yugoslavian republics. Namely, amendments to Constitution in 1974 allowed for autonomous borrowing by republics, with no restrictions. Finally, it has resulted by the structure of foreign debt 35% central government and 65% republics. The lenders to Yugoslavia were 16 foreign governments and over 500 banks, including three major international financial institutions: the World Bank, the Bank for International Settlements and IMF (Stojanović, 2017, Uvalić, 2017, Žižmond, 1992). The crucial role in avoiding bankruptcy has been played by IMF, and this support came with conditionality – in form of required reforms. These reforms were needed, but also recognised by some authors as a cause of further unfortunate events in

Yugoslavia, due to social effects and significant decrease of living standards (Woodward, 1995).

The crisis in 80s has triggered reform processes in ex-Yugoslavia. Namely in 80s, and in 1990 many key laws have been adopted or significantly changed. To name the most important ones: Law on companies, Law on banks and other financial institutions, Law on society capital, Law on trade, Law on restrictions of market and free trade of goods and services of special country interest, Law on quality control in export of agriculture and food industry products, Law on special tax on import of agriculture and food products, Law on price controls by society, Law on obligations, and Law on labour rights.

Many authors have analysed effects of these measures and mainly come to the same conclusion: they were late, with marginal effects and limited outreach due to contradictory bureaucratic regulations (Janos 1997, Sundhaussen, 2012, Damachi & Seibel, 1982). Protective pricing rules as well as relaxation of borrowing and decentralisation of internal and external borrowing by different government tiers made all these reform attempts inefficient and counterproductive. Finally, it led to bankruptcy stage and IMF interventions.

As of today, legal and regulatory framework in Bosnia and Herzegovina strives to European standards. Although, the overall framework is very different, the reform processes are still needed, and major reforms are pending on the way to EU accession. According to the latest European Commission report Bosnia and Herzegovina is at an early stage of establishing a functioning market economy and major reasons are related to the fragmented internal market as well as lack of cooperation and coordination of economic policymaking (European Commission 2022).

The important part of the literature used for this paper are formal sources i.e. Official Gazette of SFRJ (ex-Yugoslavia), Bosnia and Herzegovina, Federation of Bosnia and Herzegovina, and Republika Srpska as well as Statistical Yearbooks and data by Agencies for Statistics. Using official sources as secondary data provides additional value to findings in this paper. In this phase of research authors decided not to use any primary data, such as questionnaires as the primary objective is to identify hard facts, not influenced by subjective views or interpretations.

3. METHODS AND DATA

The methodology combines qualitative and quantitative methods aiming to provide context for analysis based on as many objective factors and indicators as possible. The research topic requires extremely complex analysis and several phases in relevant data selection. This is due to the comparison of periods, which have very different political and administrative context, legal and regulatory framework as well as different systems for data collection.

Desktop analysis, compilation, deduction and comparative analysis of legal and regulatory framework are used as starting point to define context and enable analysis of comparable values.

Comparative analysis of provisions of relevant laws and overall goals of regulation is core part of the context analysis. Authors have collected relevant laws in 80s, mainly adopted or significantly changed in period 1980-1990, as well as recent laws and bylaws relevant for the research. The comparative analysis has been done in two major areas: (1) Prices and consumer protection (2) Labour and wages. Complementary to the core analysis, the comparative analysis of fiscal and financial framework is conducted out to provide context for interpretation of the results.

Aiming to conduct out comprehensive legal and economic analysis the main challenge was to select most appropriate methods and enable reliable analysis and data interpretation. Therefore, authors' focus was on identifying areas where meaningful analysis and comparison of two periods is possible. It was of crucial importance to identify discrepancies and differences between two periods and assess influence on research and interpretation of results.

The major limitations in process of selection of data and methods are:

- Legal and regulatory framework is highly dependent on political system. Comparison of two periods with different political system is challenging due to very different goals and objectives of policy makers
- Availability of products and services is very different in analysed periods. In 80ies some goods were not available at all due to trade restrictions (import and export bans) or were available in restricted quantities per household. Today, free trade regime secures availability of goods.
- Disposable income spending is very different in compared periods. In 80ies, an average household did not have significant spending on rent, vacation, or education. Today these are significant expenditures of households.
- Disposable income is limited before 1990 due to incomparable banking sector and access to financing.
- Different set of data is available in observed periods. In particular lack of data for prices of services limited analysis to essential goods.

The process of data selection and analysis had four phases. In first phase, authors analysed full set of laws regulating prices, labour and wages, as well as statistical reports for period 1960-2022. The second phase included deduction, by comparing available data in different periods and enabling identification of outliers and incomparable data. Selection of data for analysis is done in third phase, where 33 laws and bylaws, as well as 15 products were selected and analysed. It allowed analysis and data comparison in fourth phase as well as interpretation of results, conclusions and recommendations and identification of areas for future research.

Legal environment analysis in both areas is based on official sources such as Official Gazette, IFIs reports and other official sources. In first phase the overall legal and regulatory framework in 1990 has been analysed and selection of relevant laws has been done for further analysis. During second phase the relevant provisions of the laws are selected and analysed to enable comparison of the periods.

The data used in legal environment analysis is provided in Table 1, organized by period of analysis.

Table 1: Laws and regulations overview

1990	
1.	Constitution of SFRJ
2.	Law on companies
3.	Law on banks and other financial institutions
4.	Law on society capital
5.	Law on trade
6.	Law on restrictions of market and free trade of goods and services of special country interest
7.	Law on quality control in export of agriculture and food industry products
8.	Law on special tax on import of agriculture and food products
9.	Law on price controls by society
10.	Law on obligations
11.	Law on labour rights
12.	Law on foreign transaction and debt
13.	Decision on terms and conditions for declaring bank or other financial institution illiquid
14.	Law on foreign currency transactions
15.	Law on foreign trade
16.	Law on business relations at the market
17.	Law on associated labour
18.	Act on fight against unfair competition and monopolistic agreements
2022	
19.	Law on price control in Federation of Bosnia and Herzegovina
20.	Law on price regulation in Republika Srpska
21.	Law on price regulation Brčko District BiH
22.	Labour Law Federation of Bosnia and Herzegovina
23.	Labour Law RS
24.	Law on banks in Federation of Bosnia and Herzegovina
25.	Law on banks in Republic Srpska
26.	Law on borrowing, debt and guarantees in BiH
27.	Law on protection of financial services customers FBiH
28.	Law on protection of guarantors rights in Federation BiH
29.	Law on Banking Agency in Federation BiH
30.	Law on Banking Agency in Republic Srpska
31.	Law on deposit insurance
32.	Law on consumer protection in BiH
33.	Law on consumer protection in RS

Source: own compilation

Economic analysis is based on the data collected from official sources in charge for statistics in both periods. Selection of data for analysis is done after careful review of data consistency and collection methodology. The two core sets of data include: (1) average wages and (2) prices of goods and services. In addition, to provide a context for data interpretation additional data sets

have been analysed: (1) working age population share, (2) share of women in total employed, (3) employment by sector, (4) wages by sector.

Data on average wages were consistently available for all periods analysed, while data on prices varied over the period in terms of products selected by statistical agencies. After review of availability of prices for all periods analysed, the following products have been selected for comparative analysis:

Table 2: List of goods analysed

1	Bread type 500 1kg
2	Flour type 500 1 kg
3	Potato 1 kg
4	Beef meat 1 kg
5	Milk 1l
6	Butter 1 kg
7	Eggs 1 piece
8	Cooking oil 1l
9	Coffee 1 kg
10	Rice 1 kg
11	Electric cooker
12	Sofa
13	Wood for heating m ³
14	Electric power
15	Coal t

Source: own selection

To determine real economic value of wages and enable comparison over periods, authors considered different options and methodologies available. Due to the limitations of available prices except for essential goods, the methodology applied was rather simple. The comparison of purchase power 1990 vs 2022 was done by comparing work-time needed to buy product and work-time needed to buy basket of products. Work-time needed to buy a product was calculated as a time that person with average salary need to work to earn enough money to buy certain product. Work-time needed to buy a basket of products is calculated as time that person with average salary need to work to earn enough money to buy a basket of essential products needed for monthly consumption by households. Having in mind that data availability limited analysis to essential goods, work-time needed to buy basket of products provides insight into share of salary spent on essential goods.

The comparison of data is done for the year 1990 and 2022, as well as for five-year time series 1986-1990 and 2018-2022. Due to the lack of consisted data for full period, it was not possible to do comprehensive analysis for whole period. 5-year comparison address the issue of economic disruptions like high inflation in 80ies and Covid-19 pandemic since 2020, while limited time series aiming to address issue of affordability of certain products.

4. RESULTS

Prices and consumer protection

Law on price control by society¹ set the prices control mechanisms in form of specialised departments in government and companies. These departments were responsible for monitoring of prices, supply and demand of goods as well as to monitor and analyse economic policy impact and effects of price control when applied. The system mechanisms allowed for setting fixed prices of agriculture products, anti-monopolistic measures and direct control of prices. These mechanisms were controlled centrally and communicated from central government to lower government tiers and companies. Such a complex system and central planning of measures and price levels had resulted in low productivity, high inefficiency and finally in high non-profitability of companies.

Currently, three laws regulating the prices are in force: Law on price control in Federation of Bosnia and Herzegovina², Law on price regulation in Republika Srpska³ and Law on price regulation Brčko District BiH⁴. The goals and the content of these laws are in essence very different from the ones in 80s and implementation of mechanisms is taking the place only in case of market mechanism disruptions. There are specialised inspections in charge for monitoring and control of regulation's implementation.

The consumer protection is not a new topic in Bosnia and Herzegovina. Historically, back in 80s, some of protection features may be found in Law on foreign trade⁵ and Law on business relations at the market⁶, as well as by Law on associated labour⁷ and Law on rules of pricing system and prices control by society which allowed establishment of consumer councils in government tiers levels. However, the impact and power of these councils were very limited as all major decisions related to the demand and supply of goods and services were taken by central government.

As of today, consumer rights are regulated by Law(s), which are not are not harmonized between entities, but still provide much better framework for consumer protection that it was a case in 80s. The legal framework is consisted of Law on consumer protection in BiH⁸, Law on consumer protection RS⁹ and there also institutions in charge to regulate terms and conditions at the market and protect consumer rights directly or indirectly: Ombudsman for consumer rights protection and Competition Council.

¹ „Official Gazette SFRJ“ 27/85, 47/89 and 53/90.

² „Official Gazette of Federation BiH“ 02/95,70/08

³ „Official Gazette RS“ 106/09

⁴ „Official Gazette Brcko district BiH“, 13/22

⁵ „Official Gazette FNRJ“, 27/62

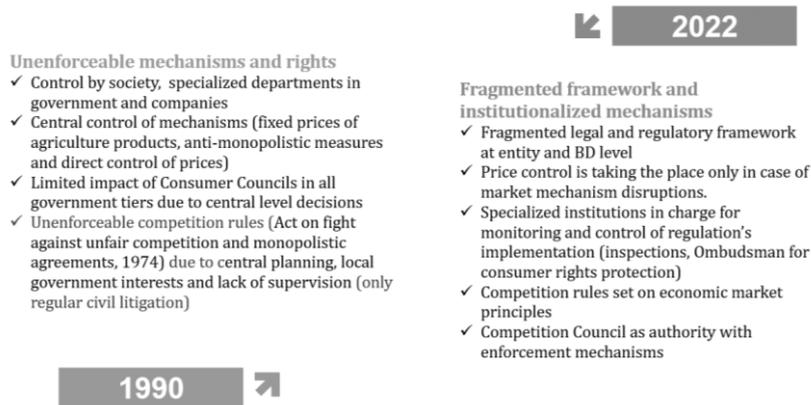
⁶ „Official Gazette FNRJ, 30/62

⁷ „Official Gazette SFRJ, 53/76

⁸ „Official Gazette BiH“, 25/06 and 88/15

⁹ „Official Gazette RS“, 6/12, 63/14, 18/17 and 90/21

Figure 1: Comparison of legal and regulatory framework for prices and consumer protection



As Figure 1 shows, legal and regulatory framework in 1990 was characterised by unenforceable mechanisms and rights, while in 2022 is characterised by fragmented framework and institutionalised mechanisms.

Labour and wages

The protection of workers' rights has been embedded in SFRJ Constitution whereby it was stated that wage and other labour rights shall be at sufficient level to guarantee to any worker financial and social security. The Law on labour that was in force 1990 has defined the basic rights of workers and wage levels. The collective and sector agreements were concluded by unions and chambers for so called "economy sectors", while for public enterprises and other state institutions the agreements were signed between unions and respective level of government, back in time called "društveno politička zajednica". The guaranteed minimal amount of wage had to be confirmed by republic governments (Izvršno vijeće) every three months and is set as 60% of average monthly wage paid in previous quarter. The payment of wage is obligatory, and penalty is prescribed for all responsible persons that do not pay a wage at least once per month.

Even if today, Constitution of Bosnia and Herzegovina do not explicitly mention "right to work" as it was a case with SFRJ Constitution, it could be derived out of overall right to poses the property as it is result of work. But at the entity level, Constitution of Federation of Bosnia and Herzegovina and Constitution of Republica Srpska explicitly mention right to work and freedom to work.

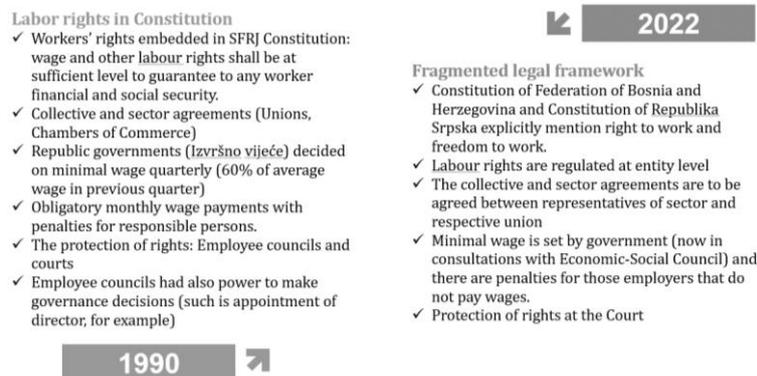
Furthermore, the labour rights are regulated at entity level by Labour Law Federation of Bosnia and Herzegovina¹⁰ and Labour Law RS¹¹. Minimal wage in both entities is defined by Government after consultations with Economic- Social Council. The collective and sector agreements which further define labour rights are to be agreed between representatives of sector and respective union. Government is an counterpart only in agreements with sectors dominated by public enterprises or public institutions i.e. where government is an employer.

¹⁰ „Official Gazette“ 26/16, 89/18 and 31/20

¹¹ „Official Gazette RS“ 1/16, 66/18, 91/21 and 119/21

Similar to the law in 1990, the current labour laws guarantee right to work and wage, minimal wage is set by government (now in consultations with Economic-Social Council) and there are penalties for those employers that do not pay wages.

Figure 2: Comparison of legal and regulatory framework for labour and wages



Back in 1990, the labour rights were embedded in Constitution and employees had a power in corporate management, while in 2022 Constitution guarantees right and freedom to work, as well as owning the property. Fragmented legal and regulatory framework today remains to be a major challenge.

Fiscal and financial sector

Flexible borrowing rules allowed uncontrolled borrowing by republics without any approvals from state level. Also, relaxed borrowing rules for companies, enabled by Law on foreign transactions and debt¹² resulted in huge increase of debt in government and economy sector. In 1989 and 1990 three pieces of legislation were adopted aiming to resolve debt issues: Law on Central bank and standardised activities of central banks of republics and regions¹³, Law on banks and other financial institutions¹⁴ and Decision on terms and conditions for declaring bank or other financial institution illiquid¹⁵. The later prescribed the terms and conditions to declare illiquidity status for a bank or other financial institutions due to unpaid due obligations on loans or guarantees. Having in mind that banking system was composed of 150 banks and 9 holding banks founded and controlled by the companies in “society”/ state ownership, illiquidity of banks had a direct and destroying impact on economy, budgets and citizens wellbeing.

The Law on banks and other institutions has reformed banking system by stablishing banks as separate, independent institutions. Till adoption of this Law, banks existed only as in-house departments within big state owned companied and served the financing needs of the company and employees. However, this reform come too late and effects of the reform have been affected negatively by currency policy. Namely, 1990 the SFRJ currency, dinar, become convertible and with fixed, very favourable rate to DEM set by Central bank of Yugoslavia. Fixed exchange rate triggered massive withdrawal of foreign currency savings and at the end of 1990 the

¹² “Official Gazette SFRJ”, 15/77

¹³ “Official Gazette SFRJ”, 34/89 and 88/89

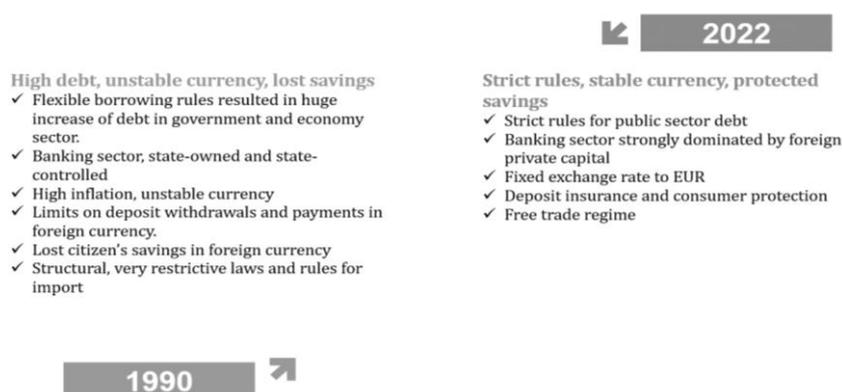
¹⁴ „Official Gazette SFRJ“, 10/89, 40/89, 87/89, 18/90, 72/90 and 79/90

¹⁵ “Official Gazzette SFRJ”, 27/90

amendments to Law on foreign currency transactions¹⁶ have been adopted to introduce limits on deposit withdrawals and payments in foreign currency. Due to these limitations and dissolution of Yugoslavia, many citizens lost their foreign currency savings or had to wait for decades to get their money back.

Figure 3 shows major characteristics of legal and regulatory framework in both periods. As discussed earlier, this topic is analysed and compared to provide context for prices and wages analysis. Disposable income depends not only on salaries, but also on funding from other sources, such as loans for example. Also, fiscal stability may be limiting factor in defining and implementing different programmes by government(s) i.e. highly indebted country hardly may afford supportive programs for its citizens and businesses.

Figure 3: Fiscal and financial legal and regulatory framework



As of today, legal and regulatory framework for financial sector in Bosnia and Herzegovina consisted out of entity regulations, namely Law on banks in Federation of Bosnia and Herzegovina¹⁷ and Law on banks in Republic Srpska¹⁸, which have been reformed several times since 1995. Banking sector in BiH is strongly dominated by foreign capital and often referred as most developed and regulated sector in Bosnia and Herzegovina. The state owned banks have very low market share and are not dominant players on the market.

Today, borrowing, debt and guarantees that were a huge issue in Yugoslavia, in Bosnia and Herzegovina are strictly regulated by Law on borrowing, debt and guarantees in BiH¹⁹. This law has introduced caps for borrowing of all government levels, risk management procedures, as well as obligatory disclosure of all transactions related to borrowing and guarantees. While this law is regulating a public debt, the terms and conditions of borrowing to businesses and citizens are regulated by market, and legal and regulatory framework is established to enable protection of deposits, protection of consumer rights and proper risk management.

¹⁶ „Official Gazette SFRJ“ 66/85, 13/86, 71/86, 2/87, 3/88, 59/88 and 82/90.

¹⁷ „Official Gazette FBiH“, 2/95, 9/96 i 25/97); Law on banks FBiH (“Official Gazette FBiH”, 39/98, 32/00, 48/01, 27/02, 41/02, 58/02, 13/03, 19/03, 28/03 and 66/13) and Law on banks FBiH (“Official Gazette FBiH”, 27/17)

¹⁸ Official Gazette RS”, 44/03, 74/04, 116/11, 5/12 and 59/13); Law on banks RSe (“Official Gazette RS”, 4/2017, 19/2018 – correction and 54/2019)

¹⁹ “Official Gazette BiH“, 52/05, 103/09

The legal and regulatory framework is consisted of numerous laws related to consumer protection (Law on protection of financial services customers FBiH²⁰, Law on banks in Republic Srpska²¹, Law on protection of guarantors rights in Federation BiH²²), supervision of banks and other financial institutions (Law on Banking Agency in Federation BiH²³, Law on Banking Agency in Republic Srpska²⁴), deposit insurance up to 70.000 KM (Law on deposits insurance²⁵).

The major difference between two periods is related to fiscal stability and availability of funding. In 1990 high debt, unstable currency and lost savings were main challenges, while in 2022 strict rules in borrowing, stable currency and protected savings were in place in legislation.

Real economic value of wages

The calculation of “work-time to earn” enough money to buy certain products is done on the basis of value of average net wage and average price of certain product.

The selection of method to calculate real economic value of wages, or purchase power of average wage has been influenced by the need to address the issue of high inflation which may have significant impact on the results, if not isolated from the model. By calculating time needed to earn enough money to buy certain product, authors were able to compare periods without making further adjustments to the data and model. The overview of work-time to earn enough money to buy a product in 1990 and 2020 is provided in Table 3.

Table 3: Work-time to earn

		1990	2022²⁶
1	Bread type 500 1kg	31m	29m
2	Flour type 500 1 kg	17m	15m
3	Potato 1 kg	24m	13m
4	Beef meat 1 kg	2h 26m	2h49m
5	Milk 1l	22m	22m
6	Butter 1 kg	4h29m	4h40m
7	Eggs 1 piece	5m	4m
8	Cooking oil 1l	54m	37m
9	Coffee 1 kg	5h34m	2h35m
10	Rice 1 kg	1h48m	38m
11	Electric cooker	1month 11days 3h 33m	9days 2h35m
12	Sofa	1month 11days 2m	14 days 7h 51m
13	Wood for heating m3	3 days 1h 49m	1 day 7h 54m
14	Electric power kWh	3m	2m
15	Coal t	7days 3h10m	4days39m

Source: own calculation

²⁰ „Official Gazette FBiH“, 31/14

²¹ „Official Gazette RS“, 4/17

²² „Official Gazette FBiH“, 100/13

²³ „Official Gazette FBiH“, 75/17

²⁴ „Official Gazette RS“, 59/13 i 4/17

²⁵ Official Gazette BiH 32/20

²⁶ November 2022

In principle, today worker with average salary need to work approximately same time or few minutes less than in 1990 to buy food like bread, flour, milk, eggs and butter. The same applies to electric power costs. For example, worker with average salary in 1990 had to work 31 minutes to earn enough money to buy a bread, while in 2022 the worker with average salary need to work 2 minutes less.

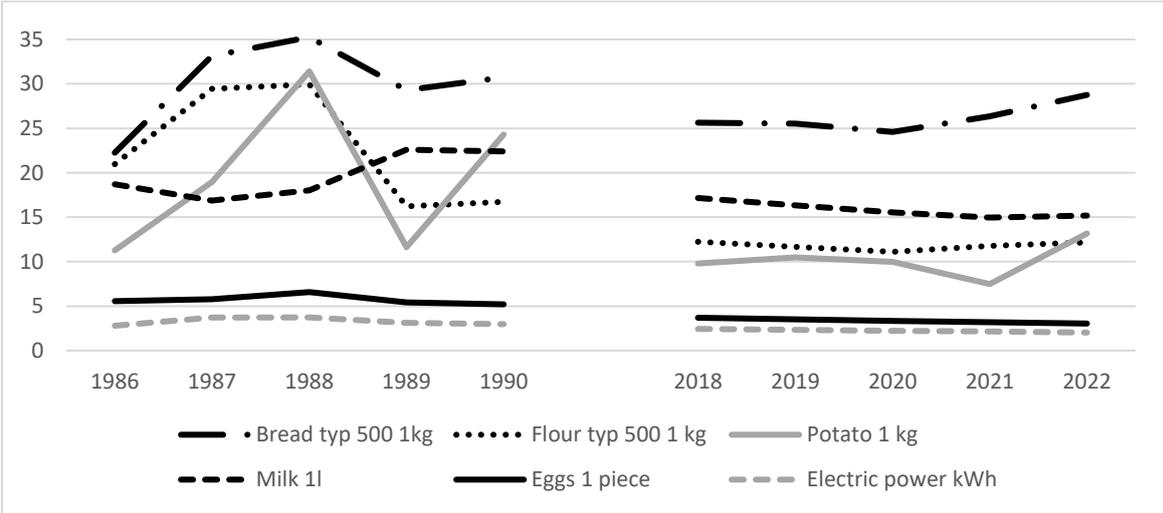
Food products like cooking oil, coffee, rice today require much less time of work to earn enough money to buy these products. The same is for wood used for heating and coal. For example, a worker with average wage today need to work 38 minutes to buy 1kg of rice, while in 1990 it required almost two hours of work. The time needed to earn money to buy 1m3 of wood for heating or 1t of coal is much lower today in comparison to 1990.

The major difference is to be observed for electrical appliances and furniture, for example electric cooker and sofa. In 1990, a worker with average salary needed more than one month to earn money equal to price of cooker or sofa. Today, worker with average salary need a bit more than 9 days to earn enough money to by electric cooker, and about 15 days to buy sofa.

Economic challenges in 80s were caused by internal factors and public policies, and in recent years external factors such as global crisis caused by Covid-19 pandemic had significant impact on economy.

Therefore, we did comparison of five-year period for better insight into the real economic value of wages over five year periods (1986-1990 vs 2018-2022) to exclude some seasonal or crisis effects, such as change of currency regime in 1990 or high inflation in 2022 due to covid pandemic and war in Ukraine.

Figure 4: Work time to earn (minute)



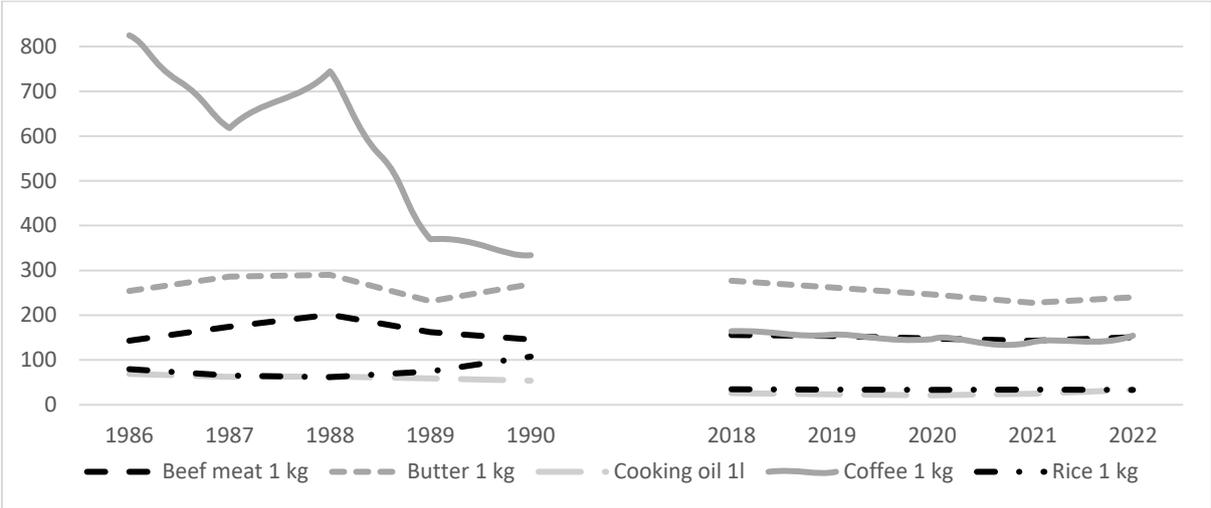
Source: own calculation

As shown in Figure 4, the period 1986-1990 is characterised with price instability and short-term effects of some measures taken in 1989 may be observed as well that disparity between wages and prices shows up already in 1990. At the other side period of 2018-2022 shows

relative stability in terms of price/wage ratio until 2022 when significant rise of inflation took the place as cumulative result of global crisis caused by Covid-19 as well as war in Ukraine.

Cooking oil, coffee and rice are much more affordable for worker with average salary today, than in period 1986-1990. In 1988 a worker with average salary had to work more than 800 minutes or almost two days to buy 1 kg of coffee.

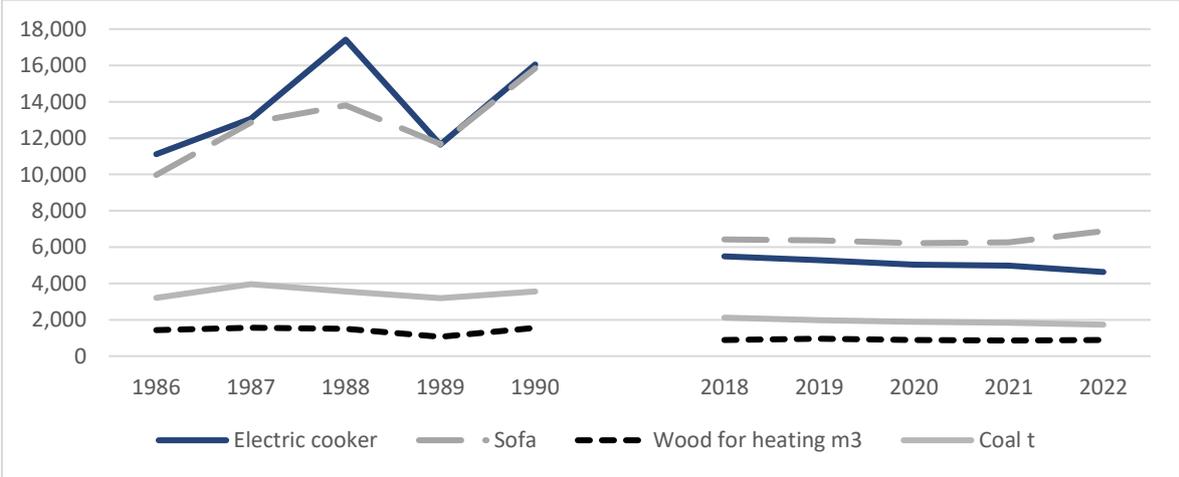
Figure 5: Work time to earn (minute)



Source: own calculation

As shown in Figure 5, in 2022 worker with average wage had to work 6 hours to buy 1kg of beef meat, 1l of cooking oil, 1 kg of coffee and 1kg of rice. To buy same products in 1990, worker with an average wage had to work almost double – 11 hours.

Figure 6: Work-time to earn (minute)



Source: own calculation

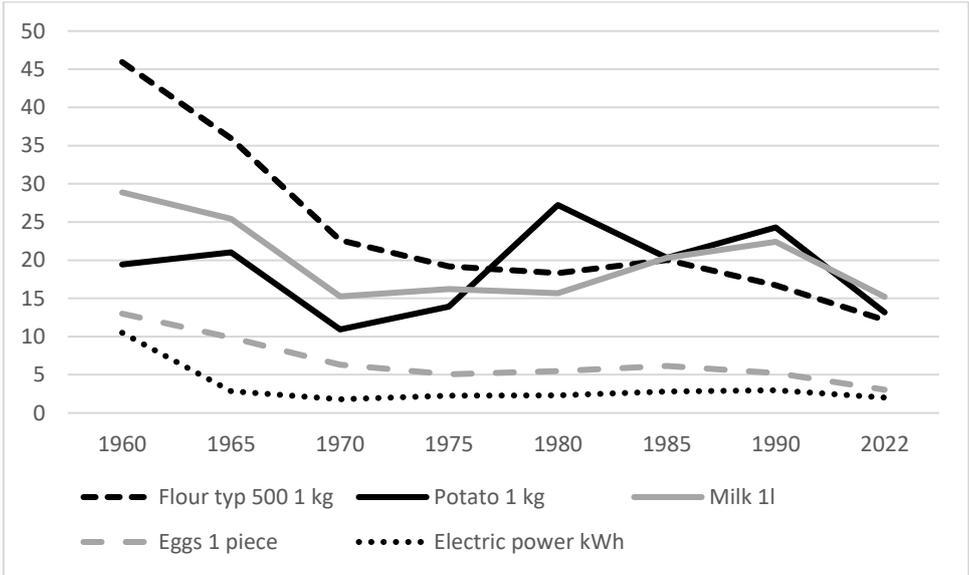
The major difference is to be observed in affordability of furniture and electrical appliances. As shown in Figure 6, worker with average wage in period 1986-1990 had to work about one and half months to earn enough to buy electric cooker or sofa. To buy same products in period 2018-

2022, worker with average wage needs less than half month of work. Same applies to wood for heating and coal which are much more affordable for worker with average wage today than back in late 80s.

In general, while the time needed to work for basic food products is more-less the same for both periods, when it comes to more expensive products, they are much more affordable now than in late 80s. Further analysis has been done back to 1960 to see if this pattern is result of crisis in 80s or is present in previous periods as well.

Back in 1960, the worker with average wage had to work 46 minutes to buy 1kg of flour, 29 minutes for 1l of milk and 13 minutes to buy one egg. As of today for the same products worker with average wage needs much less work time i.e. 12 minutes for 1kg of flour, 15 minutes for 1l of milk and 3 minutes for one egg. The prices of potato have some fluctuations, but it could be considered as seasonal due to weather conditions as well as thanks to some measures taken to protect citizens and agriculture producers. Electricity cost per kWh is at low level and require standard 2-3 minutes of work, except in 1960 when required 11 minutes.

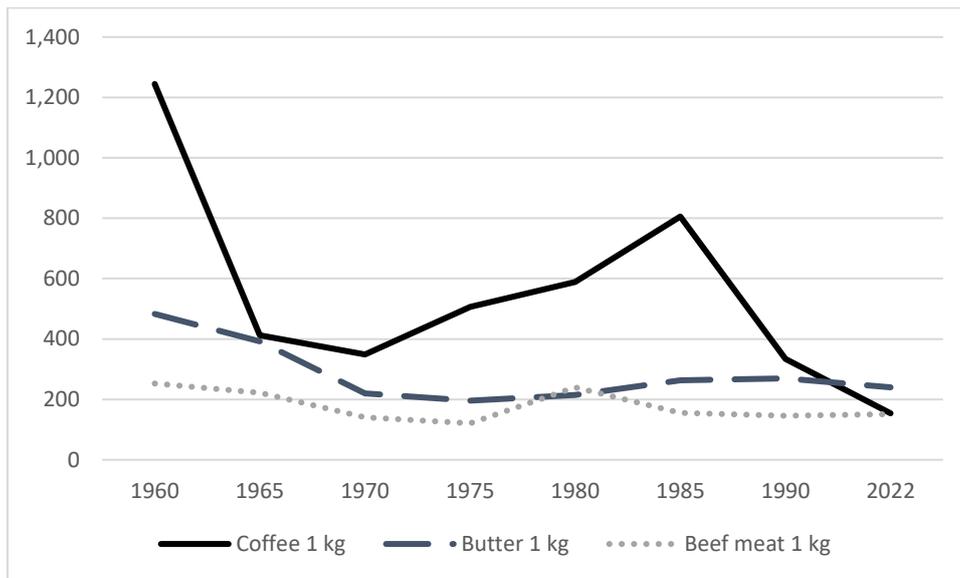
Figure 7: Work time to earn 1960-2022 (minute)



Source: own calculation

Figure 8 shows the work-time needed to by meat, coffee and butter. In principle these are more expensive goods and worker with average salary today need to work much less to afford these goods. While butter and beef meat have more-less similar pattern, when it comes to coffee, there are some peaks over the period observed. Coffee is imported products and there is no domestic production at all. So, these peaks may be explained by periods of import bans. During import restrictions, supply of goods dropped which caused significant rise of prices.

Figure 8: Work-time to earn (minute)

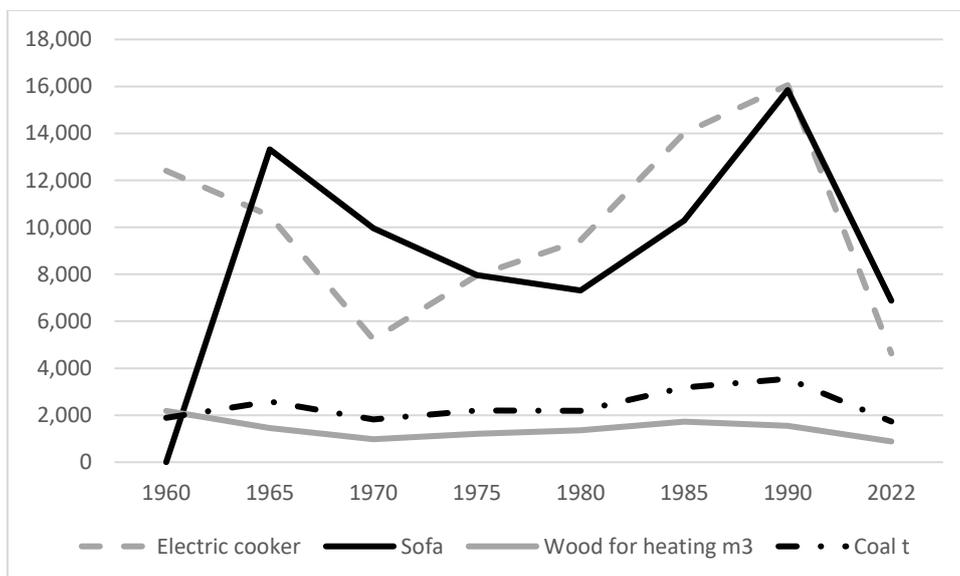


Source: own calculation

But the major differences in affordability are seen in most expensive products, and interestingly for products were BiH has rich natural resources (wood and coal). Figure 9 shows that a worker with average wage in 1990 had to work more than double time to earn enough to buy sofa or electric cooker. While in 1965 or 1990, worker with average wage had to work at last month and a half to buy sofa or electric cooker, in 2022, it takes only 10-15 days to earn enough money to buy these products.

Unlike to the trend for electric power which is traditionally affordable for workers with average wage, prices of coal and wood for heating have fluctuations, but again show the same trend as other products: worker with average wage needs less time to work today to earn money for 1t of coal or 1m³ of wood for heating, than in whole period 1960-1990.

Figure 9: Work time to earn (minute)

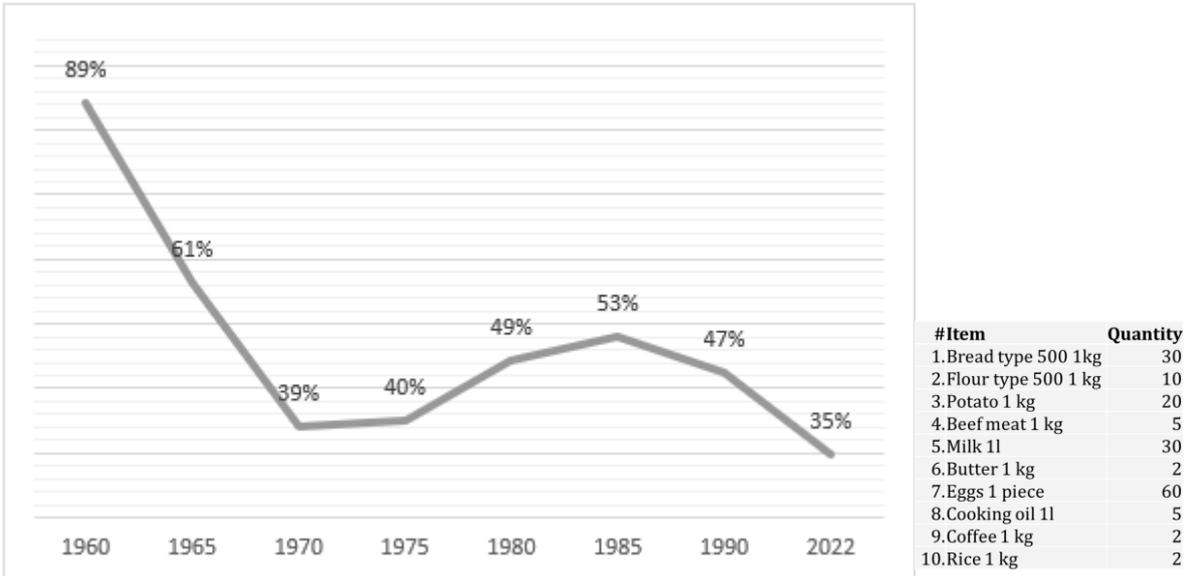


Source: own calculation

As shown in previous graphs, worker with average salary needs to work much less now to afford almost all products analysed in this paper. Differences are higher between 2022 and period 1960-1990 for more expensive goods, while there is no significant difference when it comes to time needed to earn money to buy basic food products.

Any selection of goods to be in consumer basket may be considered subjective. But the fact that data availability and structure of household spending in 1990 and 2022 allowed only comparison of essential goods, basket of products allows for comparison of percentage of salary spent on essential goods. Figure 10 shows percentage of salary needed to spend for essential goods. The basket is set based on assumption of average monthly consumption by household.

Figure 10: Percentage of salary to be spent on basket of essential goods



As of today worker with average salary spends about one third of salary on basket of essential goods. In 1960, basket of essential goods would cost 89% of average salary, and in 80is worker would spend about half of its salary on such basket.

In addition, authors analysed some factors that may have an influence on the disposable income spending, such as consumer preferences, share of workforce, and even gender balance. For example, the structure of employment by sector may have an influence on average salaries in case of higher share of better paid jobs. Higher engagement of workforce also may have positive impact by creating more demand and influencing prices of goods.

As presented in Figure 11 share of working age population in total employed is a bit lower today than in 1990. Share of women in total employed increased from 37% in 1990 to 45% in 2022.

Comparison of share of workers by sector shows significant difference in manufacture, trade and public administration. While in 1990, workers in manufacturing industry represented 40%

of total employed, in 2022 they represented only 20% of total employees. Share of trade and public administration in total employed doubled in 2022 in comparison to 1990.

Figure 11: Structure of workforce 1990 vs 2022

	1990	2022		
Working age population (15-64) share	34%	29%		
% of women in total employed	37%	45%		
Workers by sector	% in total employment		% of average salary	
	1990	2022	1990	2022
Manufacturing	40%	20%	80%	79%
Trade	9%	18%	121%	77%
Construction	7%	5%	106%	72%
Transportation and Communications	7%	8%	141%	88%
Health and social care	5%	7%	156%	132%
Education	5%	8%	160%	103%
Agriculture, forestry and fishing	4%	2%	114%	88%
Utilities (electric power, water, sewage)	4%	4%	127%	144%
Public administration	4%	9%	171%	132%
Tourism and Hospitality	4%	5%	108%	64%
Mining	3%	2%	135%	115%
Other services	3%	2%		
Financial sector	1%	2%	171%	142%

Source: own calculation

Analysis of average salary by showed that manufacturing industry tends to have about 20% lower salary than average. The number of workers in trade increased but average salary in this sector 2022 is 23% lower than average, while back in 1990, workers in trade sector had 21% higher salary than average. Interestingly, public administration and financial sector in 1990 had over 70% higher salary than average, while in 2022 they still have higher salary than average, but percentages dropped 32% higher salary in public administration and 42% higher salary in financial sector.

5 CONCLUSIONS

Transition countries, such is Bosnia and Herzegovina, have limited experience in public private dialogue. Complex environment, social tensions and unstable political situation do not provide a ground for qualitative and constructive dialogue. Lack of data as well. Public dialogue is driven by short-term goals and under strong pressure of different stakeholders to make some decisions. At the other side, lack of systematic, long-term approach based on comprehensive impact analysis of outcomes at the side of government and public institutions creates open-ended cycle. It leads to public policy dialogue in BiH based on subjective and often ungrounded arguments.

The aim of this paper was not to judge or prove which period is better “good old times in 80ies” or today. The incentive for authors to explore this topic was to identify factors that influence perceptions, trying to differentiate between objective and subjective ones.

The legal and regulatory analysis showed that many existing mechanisms are not used in full capacity. Back in 80s, there were departments established to analyse impact of measures and enable price control, but they were not sufficient. As of today, legal and regulatory framework

is modernised, striving to comply with EU standards, but implementation and effects are still lacking.

The economic analysis conducted under research aimed to differentiate between economic and evidence-based facts and subjective feeling and perception of citizens about quality of life in “pre-war time” and as of today. The findings confirmed that any worker with average salary need much less time to work today to afford different products. Authors tested 15 products over period 1960-1990 and compared the prices to average salary with current ones. There is no single product were worker with average salary needs to work more now to earn money to buy a product. In fact, more expensive products are much more affordable now: for example, in “good old times” person with average salary had to work one and half months to be able to earn money to buy sofa, while today only 15 days is needed. But at the other side, today households' disposable income is spent on a different way than in 80ies. For example, rent, vacation, sports, education were free of charge back in time, while as of today these costs have significant share in households spending, if could be afforded at all.

Legal and regulatory framework is much better as of today in terms of protection of consumer rights, banking sector provides much better services to businesses and citizens, real value of wages is much higher than in 80s i.e. a worker with average wage needs to work less than in 80s to afford same products, public policies are much stricter in terms of borrowing and debt ceilings. Still, there is an overall perception among citizens about 80s and generally ex-Yu time as wealthier period. Obviously, the reasons for such view are not grounded on evidence-based fact related to economic and legal framework. The reasons are probably to be found in subjective factors and feelings, expectations and consumer preferences.

The results of our analysis have its limitations due to significant changes of administrative set up, changes of economic and political system as well as difficulties to find data to be used for such complex analysis. The further work may be done upon collection of raw data from agencies for statistics to deeper analysis and insights into a reason for discrepancies in price levels, causal effects of measures on rise/fall of price levels for goods and services, impact of domestic production and efficiency and/or impact of restrictions to export/import on price levels, structure of household spending, consumer preferences.

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