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The Impact of the War 1991 – 1995 on the Croatian Economy – A Contribution to the Analysis of War Economies

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Abstract

The economics of the Croatian war differ considerably from what is often thought of as typical features of a war economy. Most strikingly, while wars are often perceived as generating a tendency towards repressed inflation and a command economy the Croatian economy actually moved in the opposite direction. Croatia “nevertheless” won the war. This has prompted some to think of the war as matter of minor relevance for Croatian economic development in the nineties. The paper argues that this view is mistaken. Croatia offers an opportunity to reconsider the macroeconomics of regional wars. This reconsideration demonstrates the power of the new classical framework.

JEL classification: H56, N44, P20
Keywords: Draft, total war, refugees, socialist industrialization

Zusammenfassung

“Der kroatische Krieg 1991 – 1995 und seine volkswirtschaftlichen Auswirkungen. Ein Beitrag zur Theorie der Kriegswirtschaft”

Die kroatische Volkswirtschaft brachte in den Kriegsjahren 1991 – 1995 keineswegs die gemeinhin als typisch erachteten Eigenarten einer Kriegswirtschaft hervor. Weder kam es zu einer zurückgestauten Inflation noch zu einer Verstärkung befehlswirtschaftlicher Elemente, eher war das Gegenteil der Fall. “Nichtsdestoweniger” gewann Kroatien den Krieg. Manche haben daraus geschlussfolgert, dass der Krieg für die kroatische Wirtschaft ein Ereignis von untergeordneter Bedeutung war. Diese These ist irrig. Kroatien bietet uns eine Gelegenheit, die ökonomische Analyse regionaler Kriege zu überdenken. Die neuklassische Makroökonomik erweist sich dabei als hilfreich.

JEL-Klassifikation: H56, N44, P20
Schlagworte: Wehrpflicht, totaler Krieg, Flüchtlinge, sozialistische Industrialisierung

1. Introduction

Most wars exert at least four major kinds of direct effects on the economy. First, a war typically requires a temporary increase of public expenditure. Soldiers need to be armed, moved and fed. Casualties, war-disabled persons, orphans and widows need to be provided for. Such war-related expenditures tend to decrease rather quickly when the war is over. Nevertheless they cause major macroeconomic repercussions. The details depend on the way in which the additional public expenditures are financed. Second, war causes destruction, the loss of assets may result in a decline of GDP and living standards. Third, war may result in losses of human capital and labor shortages. Fourth, some industries may be unable to make full use of their productive capacities. This may be due to interruptions of transport, raw material shortages and, most significantly for Croatia, a war-related loss of markets and customers. An obvious example is tourists avoiding an unsafe region. These four direct effects may be compounded or alleviated by reactions of consumers and private investors. These reactions are contingent on the prevailing expectations concerning the likely outcome of the war. If the first three of the four impacts are strong and predominant, they may create a pressure to transform the economic system into a command economy. This transition did not occur in Croatia, although it was suggested by some. The theoretic questions raised by this policy option have been extensively discussed in past wars but in contemporary defence economics this is a neglected issue[1], an adequate treatment of the topic is difficult to find. Historians often comment on this issue, but their propositions frequently testify to their limited understanding of economic theory. For this reason this paper starts with a digression on the theory of war economies before it turns to the Croatian experience.

During the war, by which I mean the period between summer 1991 and fall 1995, Croatia experienced two periods of run-away inflation and two monetary reforms. These events were to some extent war-related. The second monetary reform was successful and resulted in lasting monetary stability even though it occurred two years before the end of the war and thus at an ostensibly inappropriate time.

War no doubt exerted a number of indirect effects as well. For example, it influenced the scope of market oriented reforms. It seems likely that in the case of a peaceful dissolution of Yugoslavia more consistent market-oriented reforms would have been implemented, more consistent reforms most likely would have resulted in an even stronger economic recovery

[1] E.g. Hartley and Sandler (1995) pretend that the economic analysis of war essentially started only in the 1960s. This is, of course, completely mistaken. Strangely enough, they do not even mention the issue of command vs. „liberal“ war economy even though this was a major topic in the older literature.

after 1995. However, evaluating these indirect effects is not only beyond the scope of this chapter but also beside the point; as will be argued, the development of the real economy up to 1995 is largely explicable by macroeconomic shocks. Whatever reforms were taken, they could not possibly eliminate the impact of these shocks.

The statistical data on the period 1991 – 1996, which have become available since 1996, are considerably better than what was available in the early nineties. They make it possible to see the big picture more clearly. In the early nineties, observers were largely dependent on guesstimates. As a result, this chapter provides the author with a welcome opportunity to correct some of his own errors.[2] As may be worth noting, the argument of this paper implies that many if not most Croatian economists still fail to understand the key issues properly.[3]

2. War Economies – a Theoretical Digression

In the twentieth century major wars between developed nations often resulted in a change of economic system towards a command economy. If this were a general law transition towards a free enterprise economy as desired in postcommunism would be incompatible with warfare. In the nineteenth century warfare was not yet tantamount to central command. According to a commonly held view this difference is due to a change of the "production technology" employed by the armed forces. This change was first noticed around 1900. Twentieth century warfare differs by its much larger use of munition and costly weapons[4]. This renders war into a large-scale production effort resulting in additional manpower requirements for manufacturing and transport. In contrast, the number of soldiers needed differs much less from the typical nineteenth century picture. As a result large wars typically create a labor-shortage. In the Croatian war the share of soldiers in the labor force was not dramatically lower than in many other wars, somewhat less than 10 per cent of the population in employable age (15 – 64)[5] joined the Croatian army (including armed police). Another traditional tenet holds that war economies are more conducive to central control because they

[2] For the views which the author held in the early nineties see Schönfelder (1993, 1996a, 1996b). He was too pessimistic, in particular about the potential revovery of tourism, as well as about the coherence of fiscal policies and the ability of government to balance its budget.

[3] Among those whose views run counter to the central thesis of this paper are many of the best-known older generation economists, including e.g. the late B. Horvat and the late G. Nikić, M. Babić, Z. Baletić, Ž. Primorac, M. Vedriš, D. Vojnić, and S. Zdunić. In contrast, among the younger generation of Croatian economists, presumably many would voice similar views like those presented in this paper.

[4] See e.g. Eucken (1952, p. 152).

focus production on a limited number of well-defined outputs rather than catering to the diverse and largely unknown desires of a myriad of consumers, a task on which central command routinely fails[6]. Thus, in contrast to a peace economy the objective function to be pursued by central command is well-defined and known. This eliminates one of the most severe failings of central planning, the absence of meaningful and well-defined objectives, but does not result in a conclusive argument in favor of central command. Cost minimization is as relevant in war as in peace and this is another task on which central command routinely fails. When in 1944 the German leadership proposed that costs are irrelevant, this only revealed that short-term survival had become its only concern.

Theoreticians who argue that the huge quantities of munition required in modern wars are a sufficient reason to turn to a command economy fail to realize that a free-enterprise economy offers effective levers for supporting a war effort. In a "liberal" war economy interest rates go up, this results in an increased labor supply, increased household savings and reduced household consumption. The mobilizing effect of high interest rates is compounded by changes of relative prices, real wages in war-related activities and the relative prices of certain consumer goods increase, this holds in particular for most consumers' durables and residential construction. As a result households view the war as a good opportunity to earn money which they plan to spend on durables after the war. The change of relative prices should not be confused with a general price rise, which is, in war as much as in peace, a monetary phenomenon except if war causes a reduction of overall production[7]. Failure to realize the mobilizing power of interest rates and relative prices is a major reason why the case for central command is often overstated. If government is ready and able to pay competitive prices for the weapons which it wants free enterprise is perfectly good for war, it will provide government with whatever it desires. This works if government can finance most of the war-related expenditure by issuing public debt and cutting nonmilitary expenditure. However this holds only if government is unlikely to default, only under this condition households voluntarily buy large amounts of public bonds. Default becomes likely if interest rates get very high and if the war may result in total defeat. A large war surely cannot be financed by public debt and expenditure cuts alone, government has to increase taxes. The most significant war-related tax is the military draft, men are conscripted to the army. In some respects the draft differs from a lump-sum tax, but similar to a lump-sum tax it increases the

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[5] 3,3 mill according to the 1991 census, but less in actual fact.
[6] see e.g. Nove (1980, p. 176).
[7] Unfortunately, Keynes caused confusion about these matters by his proposition that war generates an „inflationary gap". See Harrison (1998, p. 48).

labor supply. If service pay is low, the draft mobilizes the labor of women, teenagers and the elderly, because drafted men are no longer able to support them financially. However, other taxes may have to be increased as well resulting in an increase of the effective marginal tax rate. This may also be thought of as politically desirable because it confiscates some war-related profits. However, higher marginal tax rates partly or fully annihilate the mobilizing effect of rising interest rates and changing relative prices. They reduce labor supply and reduce household savings, households prefer to work in the shadow economy in order to avoid taxes and they consume their income rather than wait until their savings are taxed away. This holds in particular for the rural population which may easily turn to subsistence farming resulting in a reduced supply of food for the army and the urban population. Apart from the threat of defeat and default this is a central reason, why it may become necessary to break away from the concept of a liberal war economy. Note that this is not due to a market failure, at the heart of the problem rather is the unability of government to raise enough revenue by lumpsum taxes which results from the lack of relevant knowledge. If government could gauge everybody's earning potential it could confine itself to lumpsum taxes.

However, central command is not a panacea. The successes of central planning under war time conditions often have been greatly exaggerated. In World War I German social democrats used to justify their support of the war effort by the claim that Germany is rapidly moving towards socialism and thus leading historical progress as forecasted by Marx, in this regard Lenin fully agreed with them[8]. After a while a considerable majority of the German population including most social democrats however no longer thought of this socialism as progress. Really rationing, including food rationing was so disorganized that it caused both a rapid decay of government authority and the large-scale development of black markets[9]. In World War II German central planning similarly remained strikingly disorganized until Mr. Speer took over in 1943 but then it was too late to exploit the German potential to the fullest[10]. Attempts to extract resources from the agricultural regions occupied in the east were not very successful either. In occupied France matters went somewhat better but even there manufacturing kept declining at a rapid pace and provided less to the German war effort than had been hoped for. The Italian war economy was a nearly total failure, the army suffered even from a shortage of shoes[11]. A major reason was that Italian manufacturing was highly

[8] For an example how an economist who then starred as a leading socialdemocrat intellectual moved towards this idea see Sombart (1915). Those who want to know how his journey continued may read Sombart (1934).
[9] See e.g. Orth (1997).
[10] For an illuminating analysis see Volckart (2000) who characterizes the prevailing situation as "polycratic chaos".
[11] See Harrison (1998, p. 197).

dependent on imported materials and that trade between the axis powers functioned badly. This reflects another key failure of centrally planned economies, their inability to distinguish between welfare-enhancing and welfare-reducing trade and the resulting irrationality of much international trade under central planning. Somewhat paradoxically, central planning worked best in the more liberal economies i.e. the UK and USA. It is worthy of note that in the UK and USA prices were less distorted than in Germany and Italy and thus more meaningful indicators of scarcity[12].

With this background information we are better prepared to turn to the Croatian case. Since fiscal policies are at center stage in most wars it seems natural to start with analyzing fiscal affairs.

3. The Croatian War

3.1 Fiscal Policies

Any attempt to discuss fiscal policies in a postcommunist economy must face up to the problem that data on public expenditure may be seriously misleading because in a socialist economy the distinction between the fisc and the rest of the economy is blurred. In Yugoslavia banks, in particular the central bank, and large companies such as the petrochemical conglomerate INA typically fulfilled quasifiscal functions in addition to their other more conventional activities. This parafiscal role was strengthened rather than weakened in the early years of postcommunism. This strengthening was most clearly exemplified by the transformation of INA and some other companies into even more strictly government-controlled entities which occurred already in 1990. When interpreting fiscal data one thus always needs to beware of potential developments in this obscure quasifiscal sphere. In Yugoslavia, it was notoriously intransparent; in the early nineties it became even more so. Fortunately, the data on the share of public expenditure and defense expenditure in GDP shown in table 1 reveal such pronounced trends that unreported quasifiscal expenditures surely cannot reverse the basic conclusions.

[12] In Germany prices were frozen in 1936, in the USA only in 1942. As Puth (1993, p. 598) reports there is indication that economic controls in the USA economy worked best in 1942, after 1943 distortions and black markets increased. This is not difficult to understand, in the course of time regulated prices increasingly diverged from actual scarcities.

Table 1: Percentage Shares in GDP

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Cons public exp			44,3	49,0	51,2	48,9	52,5	55,3	54,1	46,9
Cent gov exp	18,5	21,3	25,9	29,3	29,4	28,4	30,6	34,6	33,3	26,6
Defense exp	7,4	8,5	8,9	10,1	7,2	5,7	5,3	4,0	3,6	2,6

Source: Statistical Yearbook of the Republic of Croatia, various years

Note: Cons public exp means consolidated public expenditure, cent gov exp means central government expenditure. The latter does not include (most) expenditures of social insurance agencies such as pension insurance and health insurance neither does it include some other shadow budgets. Social insurance makes for most of the difference between central government and consolidated i.e. overall public expenditure, expenditures of local and regional govnerment were of much lesser significance. For 1992 and 1993 no official figures are available on consolidated public expenditure. However, the available figures on pension and health insurance suggest that cons public exp mimicked the trend of cent gov exp in those years as much as in others.

The data show considerable fluctuation. Not much should be made of them, often they are due to changes of definitions. Their primary purpose was to obscure the picture and mislead observers. Reporting the data for earlier years is useless: they are totally incomparable.[13] The data also show a strong trend which happens to be quite noteworthy. Very clearly during the war public expenditure was not higher, but lower than after the war, this holds for the share of public expenditure in GDP and obviously would hold a fortiori if expenditures were considered in absolute terms. Defense expenditure was up but this was largely compensated by sharp cuts of most other expenditure items. Unreported public expenditures financed by parafiscals such as INA and the Croatian National Bank surely added to overall public expenditure, in particular in 1991 and 1992, but cannot possibly have been so large to reverse the overall picture. There were limits to how much parafiscs and National Bank could provide. Thus, table 1 overstates the austerity somewhat, but in view of the sharp decline of GDP after 1990 the actual measure of fiscal austerity was impressive. The data also reveal that war-related public expenditures always remained relatively modest, they never came

[13] Constructing such data would e.g. require an apportioning of certain expenditure items in the Yugoslav federal budget to Croatia which would involve entirely arbitrary assumptions. The largest item of federal expenditure was defence, how do you apportion the federal army to Yugoslav member states ("republics")?

close to the ratios which major powers realized e.g., in World War Two. Thus, in a fiscal as well as in a military sense it always remained a limited war. During the war some argued in favor of a “total war strategy” which would have resulted in much higher ratios of defense spending. As will become apparent in the course of the analysis presented in this paper, this would have been a high-risk strategy not only in military, but also in economic terms.

The harsh austerity measures which were taken, such as reducing most pensions to starvation level, became possible only because after the outbreak of the war the nation accepted President Tudjman’s leadership nearly unquestioningly, the war effectively providing him with far-ranging authority.[14] Tough measures including a freeze on wages met little opposition, even the strongest lobbies such as e.g., agriculturalists found themselves deprived of most of their influence. Democratization which had made headway in the late eighties was effectively reversed; it restarted only after the end of the war. How much Tudjman’s power was contingent on the war, could be felt in the late nineties when outwardly it still appeared to be largely intact. After 1995, he and his party HDZ quickly became more dependent on voters’ sentiments and the support of various lobbies, this support needed to be bought by public expenditure programs directed in their favor. Thus, public expenditure expanded and in the late nineties it actually got out of control. In contrast, during the war Tudjman’s economic advisors managed to convince him that major budget deficits were a recipe for disaster because nobody stood ready to borrow Croatia any significant amounts on acceptable terms[15] and because domestic real balances i.e., the real quantity of domestic money, were tiny already in 1991. This sharply reduced the revenue potential of the inflation tax. Moreover, in 1991 the internal revenue service was weak and unable to engineer a major increase of tax-collection in the short run. Thus, government had little choice other than cutting expenditure. [16]

[14] This does not mean that Mr. Tudjman actually made economic and fiscal policy decisions himself. In the early nineties he rarely did, he was neither well versed nor very interested in such matters. Usually he delegated these decisions to persons whom he trusted. Democratic institutions were a facade only, parliament rubberstamped the decisions taken by Tudjman and the officials whom he appointed.

[15] The tightness of budget-constraints to quite some extent resulted from a bank-run which occurred in fall 1990. For more on that see e.g. Schönfelder (1993). Technically this bank-run concerned only foreign currency deposits, but since as a result of galopping inflation Dinar-denominated deposits had long dwindled into insignificance the run effectively threw banks in a state of quasi-insolvency. Their deposit-taking business remained negligible for several years. Thus, domestic banks were plainly unable to provide any major credits to government. Moreover, in the early nineties Croatian government at various occasions chose to behave like a capricious and unreliable debtor, thus further reducing its ability to borrow.

[16] It may be worth noting that a policy of balancing the budget by sharp temporary cuts of wages and pensions was less of a surprise for the Croatian population than it would be elsewhere. The Yugoslav economy had always been cycling between boom and austerity, whenever it reached an austerity phase it had resorted to devices such as payment arrears which hit wages and pensions. The population had long learnt to react to such instability by diversifying their sources of income and by practising solidarity within a widely defined family.

Efforts at reforming the tax system and the internal revenue service started to bear fruit only around 1995 and only this achievement and the much improved credit ratings of the country made the increase of public expenditure witnessed in later years possible.

3.2 War-Related Destruction

The war resulted in substantial destruction. This destruction often was part of a policy of ethnic cleansing rather than collateral damages of military actions as such. The primary targets of destruction were housing, churches, bridges, and local service units which often were burnt down, blown up or hit by artillery fire. In numerous war-stricken regions, few buildings survived intact; in 1996 major parts of Vukovarsko-srijemska, Sisačko-moslavačka and Zadarska županija lay in ruins. The number of destroyed factories was small because Serbian forces occupied primarily economically depressed agricultural regions which accommodated few factories. The most significant victims, the shoe factory Borovo (located at Vukovar) and the aluminimum forge TLM (located at Šibenik) which were destroyed or severely damaged were not much of a loss for the Croatian economy, because neither had been able to cover its costs for years.[17] Considerable amounts of farming equipment and cattle were lost as well; however, again the loss to the macroeconomy should not be overstated because before the war the country had produced agricultural surpluses which would have become virtually unmarketable after 1991. Serbian forces laid innumerable landmines, and their removal has caused high costs and has remained incomplete. This continues to pose risks to agricultural and forestry workers. Nevertheless, in terms of value the most significant loss of stocks was the destruction of housing, presumably more than 10% of all housing space was destroyed or seriously damaged[18].

[17] TLM was restored and returned to operations after the war and has been a serious problem ever since. E.g. in 2003 and 2004 it received subsidies (in particular government-sponsored debt conversions) amounting to no less than 360 mill Kuna. In 2005 it again asked government for 250 mill Kuna. See Privredni Vjesnik 31. 1. 2005, p.3.

[18] Croatian government appointed a commission to appraise war damages. The key data which it produced are summarized in Družić (2001, p.39). The commission claimed that 14,9% of the housing stock were destroyed, but admitted that in terms of value it was more like 10%. Unfortunately, their discussion pais little regard to methodological problems. E.g. the commission evaluated the war-related damage caused to electric industry at 2,7 bill DEM but most of these „damages“ are not due to destructions but refer to the expropriation of assets administered by the Croatian electricity company but located in other former Yugoslav “republics”. Such accounts are debatable; in Yugoslav understanding the Croatian company did not really own these assets, its property rights were of a rather enigmatic nature and thus difficult to appraise.

Some inferences on economic value lost may be drawn from the cumulative budgetary appropriations for reconstruction since 1991, a total of 25 billion kuna was appropriated from 1991 to 2004[19]. To put this figure in perspective notice that much of the actual reconstruction work was performed by unpaid labor and that, in 2001, when the most recent census occurred the population of numerous temporarily occupied regions was at most half of what it had been in spring 1991[20].

The economic analysis of damages must carefully distinguish between stocks and flows. The damages reported so far (mostly) concerned stocks. However, to evaluate the impact on the overall economy flows are the more significant item e.g., the impact of the war on the GDP produced by the people who lived in the war-affected regions. With a few exceptions, the war did not really hit the more prosperous regions of Croatia. Most of the regions which were hit had a per capita GDP considerably below the Croatian average, a disproportionate share of their population depending on transfer payments. For example, in 1989 the material product per capita in Knin[21] municipality was reported to stand at 72% of the Croatian average. This figure however understates the real differential because much of the Knin-based economic activity was not viable and depended on (implicit) subsidies provided by other more prosperous regions. In the Knin-region the war only accelerated a process of outmigration which had started much earlier and was slowed but not prevented by a costly, but ultimately futile regional policy. Between 1953 and 1991 the population of Knin had already declined from 47,867 to 42,337; in Korenica, to name another municipality located in the “Serbian republic”, the respective figures were 18,044 and 11,307. In a depressed region witnessing outmigration the value of the services provided by residential capital such as imputed rents is much lower than in prosperous regions even if the houses appear quite similar in physical terms. Consequently, the destruction of a house in Knin is less of an economic loss than the destruction of a house in Zagreb. Moreover, while some of the about 500,000 Croatian refugees remained unemployed for years many others found

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[19] Banka 2004:2 p. 18. Notice that this figure does not include an adjustment for interest or inflation. The latter is less of a problem because most of the expenditure occurred after stabilization. Since then about 7,5 Kuna have exchanged into one Euro, fluctuations have been minor. Throughout this paper DEM resp. Euro (1,95 DEM = 1 Euro) will be the preferred standard of value because throughout the nineties it was de facto the main currency inside Croatia. Kuna resp. USD are used only if official data are available only in Kuna resp. USD.

[20] The statistical yearbook presents the results of the 2001 census in a way which renders it impossible to form more than a rough estimate. It provides data on the population of županije (the official translation is counties, but provinces might seem more appropriate in view of their limited jurisdiction), but in every single županija there were regions and towns which were not occupied by Serbian forces. In some counties such as Sisačko-moslavčka, Zadarska and Šibensko-kninska it is possible to estimate the population of the temporarily occupied regions by deducting the available figures on the populations of towns (Sisak, Kutina, Zadar and Šibenik) from the overall population.

[21] Knin was the capital of the socalled „Serbian republic“ within Croatia. Data for 1989 are available only for the Marxist concept of “material product”.

employment. Indeed, the prosperous regions of Northern Italy in those times offered employment to numerous Croatians who worked for example as agricultural workers, in the shipyards, but also in more qualified positions such as engineering. Thus, in terms of GNP (but not GDP !) the impact of the war was less dramatic than it may seem.

3.3 Decline of Economic Activity

The most obvious economic victim of the war was tourism. As the stunning success of the Croatian tourism after 1997 demonstrated, this was not only a major sector of the pre-war economy, but, even more importantly, one that has been capable of a rapid development as soon as the prerequisites for overcoming some deficiencies of socialist tourism had been created. Among the changes required was some reorganization, strengthening of labor discipline, and the removal of obstacles which communists had erected against private enterprise in tourism. A considerable improvement could be achieved with no more than a rather moderate capital outlay. In the past, socialist hotels and restaurants tended to charge low prices for their services; this pricing policy reflected quality deficiencies as well as their indifference towards financial results. After abandoning some of these socialist habits quality improved, and the product became marketable at higher prices.[22]

In the eighties, the contribution of (international) tourism to Croatian GDP was estimated at 10%. Measurement problems are severe but we are on safe grounds proposing that since about 2000 its contribution has exceeded 10%.[23] To evaluate the overall impact which the decline of tourism exerted during the war one needs to take account of the impact on other sectors of the economy such as agriculture and construction. For example, tourism

[22] To what extent the growth of tourism revenues is due to price increases is revealed by the observation that in purely quantitative terms foreign tourism continues to stay far behind its prewar climax. The most obvious indicator of quantity reported by Croatian statistics i.e., tourist nights (noćenja) stood at 68 million in 1987 but at only 46 million in 2003.

[23] For the 10% estimate see Koncepcija (1990, p. 281). According to balance of payments statistics revenue earned from foreign tourists was 6,4 billion USD in 2003, GDP was 28 billion USD. Estimates of revenues from foreign tourism before 1992 are hard to come by with. Koncepcija estimates them at 1,8 billion USD in 1985. To put this figure in perspective we would need an estimate of the 1985 GDP in terms of USD. Unfortunately, until 1989 Yugoslav statistics reported “material product” rather than GDP, moreover until 1990 the official exchange rate differed very considerably from the (black) market rate. In 1990 GDP was 24,8 bill USD. It is known that between 1985 and 1990 the Croatian economy did not grow, thus it seems legitimate to take 24.8 bill USD as the best available proxy for the 1985 GDP as well. Another problem with interpreting these data is that in 1985 numerous tourists from other Yugoslav “republics” were visiting the Croatian coast who were then not recorded as foreigners. They made for 26% of all statistically reported “tourist nights”, but presumably for much less of the overall tourism revenue because Yugoslav tourists typically were served at much lower prices. These observations support the conclusion that the actual contribution of tourism to the Croatian economy has increased very significantly.

has long provided an outlet for agricultural production in the fertile Slavonian plains which is otherwise difficult to market because of EU agricultural protectionism. At the time of the war, Slavonian agriculture actually suffered from a double blow: in addition to losing the marketing outlet provided by foreign tourists it also lost access to the Bosnian market which traditionally had been supplied with Slavonian products as well. Another victim was the construction industry, which had been a major sector in the coastal regions; after 1990 construction activity was depressed for years.

It may be worth noting that the decline of tourism during the war did not imply that all of the beds prepared for foreign tourists stayed empty all of the time. Some of them were filled by refugees, some by domestic tourists. However, domestic tourists as well the very modest number of foreign tourists who visited Croatia paid much lower prices than could have been earned in the absence of the war, thus depressing the contribution of tourism to GDP.

A less obvious example of a war-victim are shipyards which found it more difficult to finance and market their products because of the high risks attached to ship-building, ship-yards are easy targets for air-raids. This worries potential customers because they are usually required to make progress or advance payments. This is because in the absence of such payments the shipyard may find itself at the mercy of its customer once the ship is finished. War-related interruptions are also likely to result in a delayed completion of the ship which tends to cause considerable damage to the customer whose business may depend on receiving the ship in time. The number of ships built declined considerably during the war. The differential between the climax (in terms of production volume) which had been reached in 1988 and the anticlimax reached in 1994 was some 66%.[24] During the eighties Croatia had at times been the third largest producer of ships in the world and shipyards were regarded as its key industry. However, the damages which this imposed on the Croatian economy were less significant than they may seem. The reason was that since decades shipyards had depended on subsidies, subsidies climaxed in the eighties. Shipyards consistently generated large losses, the value added which they produced was much less than their share in the overall sales of Croatian manufacturing. To be sure, socialist hotels often ran at a loss as well, but this was mostly because they did not care too much about profits. Hotels later managed to solve at least some of their efficiency problems. In contrast, (most) shipyards turned out as bottomless pits; their real contribution to GDP after the end of the war was either close to zero or

[24] This figure was derived from the Statistical Yearbook 1989 p. 224 and the Statistical Yearbook 1998, p. 254. Statistical definitions were changed, but we are safe in assuming that the category DM 35 reported in the latter is dominated by shipbuilding.

negative. The blue-collar workers who were laid off when ship-production declined often found it easy to get much better paying jobs in Italian shipyards.

Not much less important than the decline of tourism was the disruption of numerous branches of Croatian manufacturing, and in particular engineering industry. The engineering industry had been the favorite of socialist industrialization, but now it lost most of its key markets. Some but not all of these losses were due to the war. After years of decline the Council of Mutual Economic Assistance (CMEA) market, in particular the Soviet market, collapsed in 1991, in the very same year Croatian exporters effectively lost access to Serbian markets. After the outbreak of war in neighboring Bosnia in 1992 much of the Bosnian market was temporarily lost as well. After 1992, tensions with neighboring Slovenia increased and this accelerated the decline of Croatian exports towards Slovenia, which was triggered by end of the Yugoslav custom union. Thus, Croatian manufacturing and agriculture suffered from no less than four major negative shocks. In conjunction, this meant that they lost some 80% of their markets outside Croatia. Contrary to the claims of some centralist diehards, the Croatian economy was closely integrated with other parts of the Yugoslav economy.[25] Moreover, it entertained fairly close connections with the Soviet economy. Croatian exports to the Soviet Union had declined already after 1985 but even in 1989 they still amounted to some 3% of Croatian GDP[26] and thus to about 10% of the presumable value added generated by manufacturing.[27] Similarly, exports to other Yugoslav "republics" (i.e, member states) started to decline already before the outbreak of the war. Until 1989 Yugoslavia was surrounded by high and often impenetrable protectionist barriers, but these barriers were considerably lowered already in 1989. Then shoddy products made in Croatia started to be exposed to foreign competition to a hitherto unknown degree. Moreover, Serbia started to engage in economic warfare already in 1990.

It is not possible to figure out the relative importance of the four shocks, but it is worth noting that the decline and ultimate loss of Soviet markets[28] may have caused more of a devastating effect than the loss of Serbian markets. This was because the commercially more astute Croatian traders often managed to outsmart Soviet foreign trade officials and earned

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[25] In 1987 according to Sirotković (1996, p. 82) Croatian „exports“ towards other Yugoslav "republics" amounted to 55% of its material product.

[26] In calculating this figure from Statistički Godišnjak Republike Hrvatske 1991 material product has been converted into GDP by means of a conversion formula widely used by Yugoslav economists in the late eighties. See e.g.Bajt (1988, p. 21).

[27] In the absence of usable national accounts information, value added can only be inferred from the observation that in 1989 a quarter of the labor force was employed in manufacturing.

[28] In 1996 Croatian exports to Russia were 160 million USD, to Ukraina they were only 8 mill USD, the other "post-soviet" countries were totally insignificant. Exports to all post-soviet countries were thus down to only 0,8% of Croatian GDP.

comfortable margins on their sales. In the eighties, both Slovenia and Croatia had taken some effort to enter Western markets on a more significant scale than before, but the Slovenian effort had been both more energetic and more successful. Some major manufacturers such as the Zagreb-based company Prvomajska (7440 workers in 1989, one of the largest manufacturing companies in Croatia) used to export mostly to CMEA markets and did not survive their collapse. To illustrate dependence on Serbian markets, consider the company Jugoplastika headquartered at Split. Jugoplastika supplied the Serbian car manufacturer Zastava located at Kragujevac which, as a result of protectionist barriers, had long enjoyed some monopoly power on the Yugoslav car market. In 1990, Zastava started boycotting Jugoplastika which was a severe blow for the latter (as well as for Zastava itself because it turned out difficult to find a substitute supplier). In 1988, Jugoplastika employed 12,546 (!!) workers. In 2000, the largest among the successor companies, AD plastika, employed some 800 workers. Thanks to the efforts of talented managers, AD plastika survived the shock and found new markets with Western automobile manufacturers, but in the early nineties it had to overcome great difficulties.

Referring to these events as negative shocks is actually somewhat misleading because much of the trade which vanished was not really welfare enhancing, in terms of standard custom union theory it was trade diversion. Trade diversion was central to socialist industrialization which tended to build industries which created little or no value. In the long run the removal of trade diversion is a blessing, but in the short run it still qualifies as a shock because it takes time to find better uses for the production factors hitherto employed in producing low value output. Moreover, much of economic policies implemented throughout the nineties tended to prolong rather than abridge this short run[29].

The index of manufacturing production showed a decline from 205.2 in 1987 to 99.7 in 1994, in 1995 production started to increase again. No doubt, manufacturing went through a major crisis even though the indicator overstates the decline.[30] In spite of the war, this crisis should be viewed as closely related to the crisis which hit most of the other countries which depended on the socialist “markets”. Hence, it was not really a war-related crisis. Some economists, both inside and outside Croatia, refer to this crisis as the transition recession. In the view of this author, this terminology is highly misleading, the crisis rather should be understood in terms of conventional macroeconomics i.e., as the result of the aforementioned

[29] On this see e.g. Schönfelder (2000).

[30] The indicator is derived from Statistički ljetopis 1998, p. 253. It refers to physical output, not to value added. Value added presumably declined less, the decline of physical output was partly compensated by improvements of quality. Moreover, the index does not cover smaller privately owned manufacturing units whose numbers increased after 1989.

shocks. An international comparison shows that the crisis was not at all contingent on transition; it similarly hit Finland, Cuba, and North Korea i.e., countries which did not undergo a transition. In contrast, Slovenia and Uzbekistan got away rather gently[31]. The difference was not transition, but the loss of markets and how difficult it was to find new markets. This was easy for a raw material producer like Uzbekistan, but difficult for most exporters of manufactured goods because the latter usually suffered from quality deficiencies which made it difficult to sell them in free markets. Slovenia was different because it had redirected its exports towards Western markets already in the eighties and as a result suffered much less from the loss of Yugoslav markets than Croatia. Much of the decline of Croatian manufacturing would have occurred even in the case of peaceful dissolution of the Yugoslav federation but probably not quite as rapidly because a peaceful dissolution would have resulted in a loss of markets as well. Much of the intra-Yugoslav division of labor was an artifact of socialist industrialization, and it did not reflect patterns of comparative advantage. Trade diversion was bound to vanish in more open markets; if consumers have freedom to choose, they avoid suppliers who offer low-grade goods at high prices. This was the grain of truth in the exploitation propositions which were popular in the late eighties[32] and gave raise to a wealth illusion prevailing among Croatian and Serbian politicians. This illusion contributed to the unfortunate outcome, that even those parts of intra-Yugoslav trade which did not qualify as trade diversion and made economic sense were not sure to survive the federation because of the strong protectionistic inclinations of economic policy in all post-Yugoslav countries. Slovenian-Croatian trade offers a good example. Merchandise exports to Slovenia declined from USD 1.1 billion in 1992 to USD 500 million in 1997.

Only a small share of the overall industrial decline was thus exclusively due to the war. For example, during the war the direct connection between Dalmatia and the rest of the country was broken, so that the only remaining transport route was the long and curvy coastal road, the Jadranska magistrala (Adriatic road), and even this route was interrupted north of Zadar, forcing traffic to take the ferryboat over to Pag before returning to the mainland at Zadar. This Adriatic detour increased driving distance by some 200 km, moreover, the Adriatic road has always been ill-suited for heavy truck traffic. During the war, it often was congested causing a considerable increase of transportation costs. The war also generated an energy shortage which hit Dalmatia most but was to a lesser extent felt in other parts of

[31] Uzbekistan performed rather well throughout much of the nineties. More recently it has entered a serious crisis but this has been for reasons clearly unrelated to transition.

[32] Croatians believed that they were exploited by Serbs, and Serbs thought that they were poorer because they were exploited by Croatians. The most prominent exposition of the resulting wealth illusion was the ill-famed memorandum of the Serbian Academy of Science published in 1985.

Croatia as well. Croatian energy supply used to depend on Bosnian electricity producers. As a result, Dalamatian producers lost market shares because of increased costs of transportation and energy.

3.4 Losses of Human Capital

The death toll paid by the Croatian nation was about 12,000 – which is highly deplorable but not large enough to cause macroeconomic effects. If there had been a labor shortage, it would have vanished as soon as the war in Bosnia generated a major inflow of refugees. Croatia witnessed considerable outward migration: official statistics report that the overall population declined by 350,000 from 1991 to 2001. Effects of migration on per capita GDP are ambiguous and it is not unlikely that the net effect has been positive.

In addition, the war caused one major impact on human capital the effect of which on GDP can be unambiguously determined, viz., it facilitated a large-scale change of elites in public administration, the judiciary and enterprise management. Before the war, Croatian elites consisted also of ethnic Serbs, quite frequently highly qualified personnel. After 1990, these "cadres" often left or were dismissed and they were usually substituted by persons of lesser talent and lower educational standards who happened to be ethnic Croats[33]. In addition, not only Serbs but also many Croats were dismissed because their loyalty to HDZ was viewed as doubtful. This was even more deplorable since before the war Croatia's public administration and judiciary were decidedly superior to those in most other postcommunist countries. The change of elites thus deprived Croatia of one its most valuable assets. This was revealed by a marked and long-lasting decline of the quality of public administration and judicial output and severe mismanagement problems in the enterprise sector.

The latter have often but erroneously been attributed to the privatization.[34] Really, privatization as such has no immediate impact on the talents and abilities inherent in the average decision-maker. A fool does not become bright by going private, and the reverse transformation does not occur either. Moreover, in post-communism managerial talent is extremely scarce, and in the short run privatization simply cannot remove this bottle-neck. It is worth noting that in the early nineties the economically more successful post-communist

[33] The Croatian diaspora was a major supplier of substitute personnel. Remigrants more often than not were pronounced nationalists.

[34] To be sure, privatization more often than not has been the pretext for a change of management. However, a government firmly controlled by an autocrat does not depend on this pretext, if it wants to exchange managers it always can find some other reason.

countries such as the Czech Republic and Slovenia avoided the rapid turnover of elites which Croatia pursued.[35] Had Yugoslavia dissolved in a peaceful rather than in a violent way the turnover of elites presumably had been less rapid and pronounced in Croatia as well. The sample reported in Pusić[36] suggests that already by fall 1991 a considerable majority of the former top executives had been sacked, and the purge continued after 1991. Already then she recognized that this was one of the most significant negative effects of the war on the economy. She also noticed a fact which was recently reconfirmed by Lazić[37] that in the late eighties management elites had been more strongly inclined towards liberal reforms than any other social group of Yugoslav society. The change of management elites actually hit one of the few groups which endorsed liberal reforms.

3.5 A War Economy?

The analysis of the war already revealed that none of the traditional arguments for transition to central command was relevant for the Croatian case. There was no labor shortage neither was there a food shortage. Under socialism Croatia had had considerable unemployment which had been disguised by overstaffing. The shocks described above generated more unemployment and so did ethnic cleansing. As a result there was not a labor shortage but a labor surplus which was only partly absorbed by the needs of the army. Instead of facing a food shortage agricultural producers had difficulties marketing their products. Before the war Croatia had been a net exporter of agricultural products and as a result of the war it lost most of its export markets for agricultural products. Sharply declining wages and pensions nevertheless tended to make food unaffordable for the poor and in a Western country this would have created a need to ration or subsidize their food intake. However, in Croatia even the poor actually did not suffer a food shortage, because most families either possess agricultural land themselves or are related to somebody who does and were thus able to provide for themselves.

As was shown above, the tax burden did not increase, instead war-related public expenditure was financed by cutting other expenditure items. However, even though the rational basis for requesting a command economy was entirely missing, this quest seemed

[35] Arranging for such a turnover made economic sense only if sufficient numbers of better qualified personnel had been available. In the early nineties this condition was not fulfilled in any postcommunist country (except East Germany).
[36] See Pusić (1992, p. 129f).
[37] See Ekonomist Magazin 259, 9. May 2005, p. 22.

politically powerful for a while. It was supported by two groups. First, many of its adherents always favored centralism and command, often they had been fervent adherents of socialism before 1989 and opposed even those liberalizing reforms which Yugoslavia had actually undertaken. Second, they were supported by many who endorsed a sort of Vulgar Keynesianism and thought of public expenditure as a ready device to stimulate economic activity under virtually all circumstances. The latter view was political victorious in spring 1993 and this victory prompted the run-away inflation which occurred in summer 1993.

Adherents of such views failed to realize that consumers and markets already in 1991 reacted to the war in a way which supported the war effort in a far more effective way than a command economy ever could have done it. Croatia did not have any significant armament production, Yugoslav armament production was substantial but it occurred in factories located in Serbia and Bosnia. As a result, the most economical way to get hold of arms was importing them, and the UN-imposed embargo did not pose an insurmountable obstacle to such imports. The real problem was how to get hold of enough foreign currency to pay for them. The Croatian government did not possess any significant foreign currency reserves at the outbreak of the war. The necessary foreign currency supply could only be generated by exports. This seemed like a very difficult task since the key convertible currency earner of the country, tourism, was defunct as a result of the war. Thus, it was up to manufacturing industry to earn the required foreign currency by exporting, and this required a fundamental and rapid change, because already since 1966 the Croatian manufacturing sector had every single year been a net spender of convertible currency, not a net earner. Specifically, it had always imported more from countries with convertible currency than it had exported to such countries. Croatia had taken pride in the fact that aside from Slovenia it was the only net-earner of convertible currency earner in the Yugoslav federation; this observation was used to substantiate theories claiming that Croatia was exploited by other Yugoslav republics.[38] However, Croatia was a net earner of convertible currency only because of tourism.

In 1991, developments occurred which both forced and enabled manufacturing industry to engage in a strong export drive. Merchandise exports towards Western markets (i.e., other than former Yugoslav republics and former CMEA-countries) increased from US $1.3 billion in 1989 to US $2.9 billion in 1992,[39] Overall convertible currency earnings generated by merchandise exports reached US $4.5 billion because already in 1992 almost all

[38] Understandably, such theories were popular in HDZ. This wealth illusion was commonplace in 1990, but was shattered in 1991.

[39] Some former Yugoslav republics and CMEA-countries which absorbed a small share of overall exports are not reported in statistical yearbooks.

exports were invoiced in convertible currency. The key element in the chain of causation which led towards this magnificent result was a decline of investment and, even more significantly because of its much larger share in overall GDP, a decline of household consumption. The decline of investment is most dramatically reflected by statistically recorded construction activity which declined by about 90% after 1990.[40] The best available measure of household consumption is the turn-over of retail trade. In real terms it declined by 33% from 1990 to 1992.[41] As argued at various points of this chapter, statistical records most likely overstate the decline of GDP and consumption but the real decline no doubt has been dramatic, and in %age terms it exceeded e.g., changes in the German economy during the first years of World War Two. As will now be shown, macroeconomic consumption theory holds the answer to this apparent puzzle. It stresses that consumption depends mostly on long-term income prospects and (perceived) household wealth both of which depend on expectations. In 1991, Croats had every reason to fear a sharp decline of their household wealth. Traditionally they had sunk a disproportionate share of their private wealth in housing[42] and weekend residences (vikendice). When Serbian forces were on the advance, much of this wealth was threatened by artillery fire and arson. There also was an acute military threat to most of the Dalmatian coast where the better off Croats had their weekend residences. In retrospect, we know that Zagreb and most other cities got away with rather limited damages, but this outcome was not predictable in 1991. Also, those who were actually hit could not be sure that government would provide for an equalization of burdens. Victims had reason to fear that they might have to cope with their fate largely by themselves.[43] Thus, war created an uninsurable risk which reduced the value of the assets at risk.

Moreover, a major part of private financial wealth seemed to evaporate in 1990 when, following a series of bank runs, withdrawal of foreign currency deposits was effectively suspended by all Yugoslav banks. This freeze remained an informal measure - banks simply refused to serve orders of withdrawal - until December 1991 when the governor of the Croatian National Bank decided and announced that foreign currency deposits were definitely

[40] These are the figures reported in Statistički ljetopis 1998 p. 277. Investment in machinery and equipment appears to have declined „only" by about half. In terms of standard investment theory the decline of investment is easily explainable by the increase of risk.

[41] And thus more than GDP which declined by 29%.

[42] Those who did not live in their own houses but in state-owned houses actually possessed a socalled stanarsko pravo, a right to use which approximated ownership except that it was not easily tradable. E.g. stanarsko pravo was inheritable. So for all practical purposes stanarsko pravo should be considered as a part of private wealth.

[43] This caused much resentment. Those who lost most if not all of their property during the war watched with bitterness how quickly life normalized in Zagreb and the western parts of the country and how little their inhabitants suffered. Government took measures to compensate damages caused to the inhabitants of war-stricken regions but these measures were haphazard. Burden sharing policies lacked coherence and a perceivable concept. Often only a minor part of damages was reimbursed.

blocked but promised that savers would be reimbursed in the future. The concerned deposits amounted to more than 5 billion DEM. It seemed reasonable to expect that fulfillment of this promise was crucially dependent on the outcome of the war. If the war would be lost, foreign currency savings presumably would be lost as well. After all, banks did not possess any assets to back these liabilities, the foreign currency deposits of citizens had throughout the eighties been used to subsidize loss-making socialist companies and thus effectively vanished in a bottomless pit. The resulting gap in banks' balance sheets had been filled by a fictitious receivable, a claim against the National Bank of Yugoslavia which was worthless, because the National Bank did not have any assets to back this liability. The collapse of Yugoslavia resulted in a collapse of this fiction as well, and it became clear to everybody that banks could service citizens' deposits only if they received financial support of government. Thus, the crucial question was whether government was ready and able to provide such support. If the government lost the war this could safely be ruled out. Thus, in 1991 most household wealth appeared as acutely threatened if not lost. The only major exceptions were foreign currency hoards and the wealth which Croatians citizens were holding abroad, for example, in foreign banks. Both were substantial items, but presumably much less than 50% of overall private wealth. So it was clearly rational that Croats whenever possible avoided running down this wealth in 1991, when most of their domestic wealth was in jeopardy and instead sharply reduced their consumption. Foreign currency hoards and wealth anchored in safe havens then appeared as an indispensable reserve for the even rainier days which might well be coming. After 1992, expectations were quickly reversed. The advance of Serbian forces was definitely halted and it became more and more clear that the Croatian government would be ready and able to honor the promises made to owners of foreign currency deposits. As a result, consumption recovered quickly after 1993 and faster than statistically recorded income. Consumers regaining confidence became ready to spend a major fraction of their foreign currency hoards on consumer goods. In real terms, retail turnover nearly doubled from 1992 to 1994.

These powerful movements of domestic consumption were the crucial factor which determined the development of the balance of payments, the real exchange rate and the foreign currency market. In 1991, Croatian manufacturers lost not only their traditional foreign markets, but much of their domestic market as well because of low domestic consumption. Seeking new markets abroad became the recipe for survival, only those who managed had a good chance to survive the disaster. Entering new foreign markets was greatly facilitated by a strong real depreciation of the domestic currency which is mostly vividly illustrated by the fact that workers' (monthly) wages if expressed in German marks declined from about 600 DEM in 1990 to little more than one hundred in spring 1992, rendering them quite competitive even with China. During the same period, the decline of Croatian real wages if measured in terms of purchasing power on the domestic market surely did not exceed 60%; the real devaluation was thus approximately 50%.[44] The strength of the real devaluation is due to the fact that in 1991 most traditional sources of foreign currency dried up, e.g., tourists fled the country in spring 1991, and at the very same time government bought up foreign currency to pay for armament imports.

The effect of declining domestic absorption and real devaluation was so powerful that in 1992 Croatia – for the first and only times within decades – ran a merchandise trade surplus. As a result, getting hold of the foreign currency to pay for armament imports never caused difficulties. In February 1992, the Croatian National Bank in addition started to accumulate foreign currency reserves, in October 1993 reserves already exceeded USD 500 million.[45] This rapid accumulation for a while prevented a real revaluation which otherwise may have started already in 1992 and would have dampened the enthusiasm for merchandise exports. Real revaluation, however, became virtually unavoidable when consumption recovered in 1993, and households spent more of their foreign currency hoards. In terms of consumption theory, they returned to a level of consumption which appeared as sustainable in view of their long run prospects which then seemed fairly favorable and better than their current income. As a result, consumption often was financed by dissaving, and since households' financial wealth was made up of foreign currency assets this produced a high foreign currency supply on the Croatian foreign currency market. The resulting revaluation was instrumental for the success of the stabilization program.

3.6 Money and Inflation

Croatia introduced its own currency only by the end of December 1991, when the ceasefire provided by the Vance Plan was about to take effect. The seemingly belated introduction facilitated monetary stabilization and it helped rather than hindered financing the war. Until the end of 1991, the Croatian National Bank significantly contributed to financing

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[44] The Vienna based WIIW attempts to measure changes of real exchange rates by estimating GDP in terms of units of constant purchasing power. According to the WIIW data the real GDP in Croatia declined by some 20% in between 1990 and 1992, while in terms of DEM it declined by nearly 60%. The differential is indicative of real depreciation, this observation is in line with the 50% estimate. See www.wiiw.ac.at.

[45] This was at a time when statistically recorded GDP was less than 15 billion USD.

the war by issuing money, but the money which it issued was the money of the enemy. Before the war, Croatian National Bank had managed to hoard significant amounts of Yugoslav bank notes which were gradually put into circulation after the outbreak of the war. The fact that Croatia managed to implement such a scheme testifies to the incompetence and disorganization prevailing at Belgrade. The unsurprising result was that the monthly inflation rate increased from 6.1% in May 1991 to 25.3% in October 1991. Delayed monetary reform had the effect that the onus of inflation fell on Yugoslav rather than Croatian money. Inflation surely was an unavoidable instrument of generating public revenue during this most critical phase of the war, when Serbian forces were advancing and Croatia faced an acute shortage of weapons. The new currency named Croatian dinar was thus introduced only at a time when the survival of Croatia as an independent state appeared as virtually assured and the supply of weapons had much improved. These favorable prospects were very helpful for reducing inflation, and indeed monthly inflation rates declined to 11.3% in February 1992. When Yugoslav banknotes were withdrawn from circulation in Croatia, the Croatian minister of finance managed to sell them immediately on the black foreign currency markets of Serbia and Bosnia, and earned a nice quota of German marks from this coup. Serbian authorities were preparing to take countermeasures by voiding old Yugoslav banknotes and arranging for their official exchange into new banknotes but they came four days too late .

Thus, even though prospects of monetary stabilization appeared as favorable in early 1992, in summer inflation accelerated again, in between August 1992 and September 1993 monthly inflation rates fluctuated between 21.5 and 38.2% without a clear trend. Inflation was stopped only by a stabilization program implemented in October 1993. In contrast to the first inflation, this second inflation was not an unavoidable consequence of war-related fiscal needs, public expenditure was under control, and the budget deficit not so significant. As was mentioned already in section 3.5 this inflation was due to a misperception held both by influential figures in the ruling party and a major part of academic economists who tended to think of the depressed state of the Croatian economy as caused by a lack of effective demand and thus curable by printing money and creating demand i.e., by a Keynesian remedy.[46] This was the wrong diagnosis; depression was really due to the aforementioned shocks and curable only by a reallocation of resources which could not be accomplished in a short time. Inflation hindered rather than stimulated this process because it blurred price signals and inhibited the division of labor. Indeed, 1993 witnessed a further decline of economic activity rather than a

[46] The governor of the National Bank was sacked in April 1992 in order to remove an obstacle to this inflationary cure.

recovery, the propositions of pro-inflation quack doctors were disproved immediately. When his new economic advisor B. Škegro managed to convince Tudjman of the need for monetary stabilization defeating inflation proved much easier than anyone expected. For reasons explained above, foreign currency reserves had increased rapidly already during the times of high inflation. This created a necessary prerequisite for an anchoring solution which tied the value of domestic currency down via a currency regime closely approximating a fixed exchange rate. Another important measure was discontinuing the inflationary finance of agriculture. In Yugoslavia, agricultural companies had been among the main recipients of inflationary finance, and Croatia inherited this policy. It was discontinued in spring 1993. This crack-down on the agricultural lobby was made possible by Tudjman's war-related predominance and the corresponding weakness of agriculturalists.[47] Thus, in some sense the circumstance that the war was not over yet contributed to rather than hindered the ultimate success of the stabilization program. Actual stabilization then required little more than stopping to print money. In addition, the payment system was manipulated in a way which caused a temporary liquidity crisis and boosted the demand for (domestic) money. This further stimulated the supply of foreign currency. When the National Bank stopped printing money, the exchange rate quickly appreciated. Note, that at the time the Crotian currency was effectively convertible. Appreciation greatly increased the competitiveness of imports on the Croatian markets of consumer goods and made shopping opportunities abroad very attractive. This virtually forced Croatian traders to abstain from price rises.[48] When government in May 1994 announced the exchange of Croatian dinar into kuna, this was in economic terms a non-event. It was not a monetary reform, but only an exchange of banknotes, accompanied by elimination of three zeros.

The real appreciation of the Croatian currency effectively halted the expansion of merchandise exports which had advanced quickly in the years before. Since stabilization clearly depended on capital imports, i.e., a strong inflow of foreign currency not earned by exports of commodities or services, the survival chances of this stabilization remained dubious for quite some time. After all, net capital imports always are a temporary refuge only, after some while they are bound to dry up. However, after 1997, Croatian tourism recovered more strongly than many had expected and generated a rapidly increasing inflow of foreign

[47] This lobby quickly regained its political influence after the war was over, and as of now Croatian agricultural is among the strongly subsidized in all of Europe. However, these subsidies are no longer financed by printing money.

[48] For further details on the stabilization program see e.g. Schönfelder (1996a).

currency year after year, improving Croatia’s solvency and thus encouraging further capital imports.

4. Conclusions

The Croatian economy was a rather unusual war economy. Most notably, nations involved in a regional war (i.e., not a world war) usually run a trade deficit, in Croatia the very opposite occurred. Such differences have prompted some to think of the war as a matter of minor relevance for Croatian economic development. Instead, they view the output decline experienced in the early nineties as mostly due to transition and privatization. This chapter argues that it was due to a negative macroeconomic shock which was considerably exacerbated by the war. The resulting decline of output would not have been any less but presumably even more severe if Croatia had kept a socialist economic system. In the early nineties, manufacturing and service providers lost markets amounting to a least half of their overall output. The loss of markets for manufactured goods usually has been accompanied by losses for the service sector as well, e.g., losing the Serbian market was a significant loss for the railway and trucking industry which had transported merchandise between Croatia and Serbia. Much of the manufacturing output involved was not easily marketable elsewhere. Yugoslav markets would have declined even in the absence of the war i.e., after a peaceful dissolution of the federation, but most likely the decline would have been less abrupt and more moderate. The abruptness drove up the costs because it takes time to search for new markets and reallocate production factors. Moreover, the war knocked out tourism which in its absence could have generated significant economic growth even in the short run and would thus have been capable of compensating for much of the loss suffered by manufacturing. The fear and bitterness caused by the war contributed to a large-scale turnover of cadres, a highly destructive occurrence which delayed the adjustment to the new environment. In sum, the war transformed a major but still manageable macroeconomic shock which presumably would have caused an output decline of less than 10% into a mega-shock resulting in a much more significant decline.

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