Economic Viability
Under Frozen Conflict:
"The Island of Transnistria"

Iryna Sabor

Master's Thesis in Peace and Conflict Studies
Department of Political Science

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Summary

The thesis attempts at assessing dynamics of economic viability of Moldova's break-away region Transnistria living under frozen conflict. By assuming that Transnistria is a small developing island state, Briguglio's methodology of juxtaposition of structural economic vulnerability and resilience was employed for the research. A quantitative method of calculating the Economic Vulnerability Index was combined with a qualitative analysis of expert interviews to estimate the structural economic vulnerability and resilience of the separatist republic respectively, and draw conclusions on the region's economic viability. Also other theoretical and empirical studies on SIDS were utilized to explain the pattern of economic viability under frozen conflict and point to possible implications for the future. Finally, suggestions are made on possible use of the methodology elaborated in the research in similar studies on other de facto states.

Key words: de facto state, economic viability, Economic Vulnerability Index (EVI), frozen conflict, resilience, secession, small island developing state, state building, structural economic vulnerability

Contents

Introduction

Over the past 70 years nearly 20 unrecognized or *de facto states*[1] appeared on the political map of the world. The usually tiny grey spots with blurred boundaries often resemble small abandoned islands: as a meeting place of myth and mystery, de facto states remain equally unknown to the world. Unlike the gardens of Eden arising in the imagination whenever a small island is mentioned, de facto states are most commonly associated with an "offshore" paradise for illegal businesses and criminal activity.

Despite prevailing skepticism, there have been examples in history when de facto states reached international recognition and continued their existence as independent countries. The most known example to mention here is the Democratic Republic of Timor-Leste – the first sovereign state born in the 21st century. Intense diplomatic efforts have opened for limited recognition by a number of UN members of the State of Palestine and the Republic of Kosovo. The Republic of China (Taiwan) has opted for a strikingly unique strategy of living in the non-recognition: refraining from the struggle for a formal recognition while at the same time, boosting pragmatic cooperation with the world. The Republic of Abkhazia, the Republic of South Ossetia, the Pridnestrovian Moldovan Republic, PMR (Transnistria), the Republic of Nagorno-Karabakh and the Turkish Republic of Northern Cyprus are either recognized or informally supported by their *patron states*[2] only. While the Republic of Somaliland keeps struggling for existence retaining no legitimacy beyond own sovereignty claims,

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[1] Unrecognized states are also called de facto states, quasi-states (Kolstø), separatist states (Lynch), or pseudo-states (Troebst). Pegg (2008) defines the following six characteristic features of *de facto* states: organized political leadership, sufficient capacity to provide governance, effective control of a territory for at least 2 years, capable of entering relations with other states, seeking a wide-spread international recognition, and the final feature is the lack of the wide-spread international recognition. Sharing this view, Caspersen (2011) speaks about *unrecognized states* as characterized by de facto independence, including control over most claimed territory for at least two years; lack of very broad international recognition; and a demonstrated aspiration for full, de jure, independence. Despite the lack of a clear tradition in the use of the terms, the "de facto state", as defined by Pegg (2008), has been more commonly used and therefore will be preferred in the thesis.

[2] The concept "patron states" is used in the literature to define the states that support the breakaway region both financially and politically, usually for strategic or historical reasons.

a bulk of de facto entities (the recent example being Tamil Eelam) were integrated back into their *parent states*[3].

All in all, de facto existence may last for a lengthy period of time, the reasons being manifold. Setting the geopolitical considerations and military capacity aside, the factor of *economic viability* appears to play a role. In the first comprehensive study of the secessionist economy[4], Bookman (1993: 145-146) defined economic viability as "*ability to sustain growth in the aftermath of secession at the preindependence levels*" and mentioned it among the factors contributing *to the success of a region's efforts to secede* (Bookman 1993:3).

Being vital for political survival, economic development of de facto states is perceived to be considerably constrained by the lack of legitimate status and often also by an ongoing conflict with the parent state. Traditionally, such conflicts in the post Soviet space, where most of the present day de facto entities struggle for existence, are referred to as *frozen conflicts*[5] (or "protracted conflicts" in the OSCE terminology). The "no peace no war" situation in the four self-proclaimed republics (Transnistria, South Ossetia, Nagorno-Karabakh and Abkhazia) exerts a destabilizing impact on economy, leaving few opportunities for legal trade with foreign countries. Surprisingly enough, in some of de facto states, and primarily in Transnistria, frozen conflict has urged active state-building and economic development efforts. In the absence of the final settlement in the conflict, Transnistrian de facto government seems to have launched efforts, accompanied by the corresponding propagandistic campaigns, to

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[3] The parent state is the state that used to incorporate the breakaway region and claims jurisdiction over the entity (Bookman 1993, Kolstø 2006). Nodia (2004) offers an alternative term, the *rump state*, which is, however, seldom in use.

[4] According to Crawford, *secession* is "the creation of a state by the use or threat of force without the consent of the former sovereign" (Crawford 2006:375). A more simplistic definition is provided by Pavkovic and Radan: "creation of new states by the withdrawal of a territory and its population from an existing state" (Pavkovic and Radan 2007:2). While Premdas (1990:15-16) defines secession through its main characteristics: "an organized struggle, a demand for territorial self-government, common language, religion or ethnicity, a perception of self-determination as a right, and the desire to be a state in the international organization". Premdas' definition is closest to the definition of de facto states, given earlier in the Introduction and adhered to further in the thesis.

[5] Frozen conflicts are best defined by Nodia (2004) as those in which violent ethnopolitical conflict over secession has led to the establishment of a de facto regime that is recognized by neither the international community nor the rump (parent) state from which the secession occurred and, as Clancy and Nagle (2009:14) add, which ended with a stalemate without any peace agreement signed.

build a viable and functioning economy as a prerequisite for international recognition in the future. These efforts confirm functionality of *status quo*[6] and call for a vigorous scientific research of economic development under frozen conflict.

In this context, Transnistria represents a highly interesting case. Proclaimed in 1990, Moldova's breakaway region possesses practically no ethnic identity. There is no "Transnistrian language", neither has the "Transnistrian nation" been ever mentioned in history. Transnistrian de facto statehood is closely related to the territory, referring back to the island metaphor. Like a small island state, Transnistria struggles for a viable economy with the limited resources available, despite the isolation and unfavorable (hostile) environment. Whereas, building a viable economy corresponds with Transnistrian state-building efforts aimed at putting an end to the exhausting frozen conflict. How vulnerable is its de facto economy to external factors? Is it viable enough to offset the adverse impact of the frozen conflict situation? Has its capacity to survive changed over the years after secession? And in the end of the day, is it able to survive in the long run?

The thesis will explore the economic viability of Transnistria over the past 10 years to reveal its dynamics, to assess its present potential, as well as to predict the future scenario of its economic development under frozen conflict. Since the quantitative scientific research on the issue has been modest, an attempt will be made to elaborate an appropriate methodology to assess de facto economy's viability. For this purpose it will be assumed that Transnistria is a small island developing state (SIDS). By employing the SIDS theory developed by Briguglio (1995) the thesis will consider *economic vulnerability* and *economic resilience* of Transnistria as main antagonistic determinants of its economic viability. The region's vulnerability will be measured by the Economic Vulnerability Index developed by the UNDESA (2008) and refined by Guillaumont (2009) and Cariolle (2011a), while its resilience will be explored through qualitative analysis of expert interviews.

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[6]According to Kemp (2011), it is now necessary to reconceptualize frozen conflicts and to stop viewing the status quo as dysfunctional. Conflict resolution might not always be possible and de facto states might be seen to represent a new hybrid form in the international system. Therefore, there is need for a focus on the on-the-ground issues in frozen conflicts, such as economic development and the need for rebuilding trust.

The thesis will begin with a brief outline of the history of the conflict. By revealing the role of economy in Transnistria's state-building project, the research question will be posed. In the second chapter, the knowledge gaps will be located and clear aims for the research will be set. Revealing similarities between de facto states and SIDS, the thesis will proceed by setting main theories of economic development of the small island developing states as a theoretical framework to assess the economic viability of Transnistria's de facto state. The notions of structural economic vulnerability and economic resilience will be defined. In the end of the chapter, economic viability will be presented as juxtaposition of the two notions. Finally, the research objective will be accordingly refined.

The third chapter will dwell upon research methods. The thesis will draw arguments for the use of the EVI index, developed by the UN for SIDS and least developed countries (LDCs), to measure Transnistria's vulnerability, and proceed by a detailed description of the index components. The other part of the chapter will be devoted to the method of expert interviews to be applied to assess Transnistria's economic resilience.

In the final fourth chapter scores of the retrospective EVI computed for Transnistria for the period of 2001-2010 will be presented and interpreted. Further, the economic resilience of Transnistria will be explored on the basis of knowledge gathered in the course of experts interviewing. Relieving some limitations of the theoretical framework, the thesis will point to several topics requiring further research.

Finally, conclusions will be drawn on Transnistria's economic viability, as well as on applicability of the methodology used in the thesis to similar researches on other de facto states living under frozen conflict. To sum up, some implications of the empirical findings will be suggested.

Recognizing the importance of consistency, the term "de facto state" will be adhered to throughout the research. "Separatist republic" and "Moldova's break-away region" will be occasionally used for linguistic brilliance, since according to the international law Transnistria is still a part of Moldova. As the conflict is characterized by relatively peaceful coexistence between the state and the secessionist region, the term "conflict settlement" negotiations instead of "peace negotiations" is preferred.

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1 Transnistria's State Building Project

1.1 From the History of the Conflict

The history of Moldova's statehood dates back to 1359 when the Principality of Moldavia was established. In the late 16th century the principality fell under the rule of the Ottoman Empire, and in 1812 it was transferred to Russia, until in 1918 most of its territories (Bessarabia) became part of Romania. The Soviet troops annexed Bessarabia and Northern Bukovina in 1939 according to the Molotov-Ribbentrop Pact, and after a short period of Romanian rule in 1941-1944, the territories were united into the Moldavian SSR and remained an integral part of the Soviet Union until its collapse in 1991. Romanian influence, though, remained substantial in the republic. Also Moldovan language is practically identical with Romanian.

In the 16th century the present day Transnistria (a strip of land in the East of Moldova between the Dniester river and the border with Ukraine) became part of the Polish Lithuanian Commonwealth until incorporated into the Russian Empire in the early 19th century. It was part of the Ukrainian SSR between 1924 and 1940 as Moldavian Autonomous SSR, and was united with the rest of present day Moldova to form the Moldavian SSR in 1945 (for detailed history of Moldova and Transnistria see Human Rights Watch 1993 and ICG 2003).

Figure 1.1 The Map of the Republic of Moldova

Source: www.bbc.co.uk [online], retrieved March 31, 2012

In view of the historical turbulence outlined above, Transnistrian region and the core of Moldova experienced different realities and were subject to different patterns of development. The difference persisted also through the Soviet period of Moldovan history, when due to the Soviet planning policy, Transnistrian industrial capacities were manned by skilled workforce from other Soviet republics, mostly from

neighboring Ukraine and Russia. At the same time, the mainly agrarian rest of Moldova remained ethnically intact over many years. This was later reflected in ethnic compound, which contributed to the shaping of Transnistrian separatist movement in the late 1980s. According to Human Rights Watch (1993), at the dawn of Transnistrian separatism Moldova's population was far more homogeneous than that of the Transnistrian region:

Table 1.1 Ethnic Composition of Moldovan and Transnistrian population

Ethnic Identity:	Moldova (the 1989 USSR census)	Transnistria (the 1989 USSR census)
Moldovans	64,5%	40%
Ukrainians	13,8%	28%
Russians	12,9%	25%
Gagauz	3,5%	No figures
Other	5,3%	7%

Source: Human Rights Watch 1993

Transnistrian conflict dates back to the late 1980s and early 1990s, when in the course of the Soviet Union's dissolution, Moldova, along with other 14 former USSR Republics, gained its independence. The new state with slightly more than 4mln population and the area of 33,7 km^2 inherited a number of challenges from the Soviet period, including disrupted economy and strong separatist drift in two of its administrative regions (Transnistria and Gagauzia). To counterweigh the handicaps, Moldova enjoyed a beneficial geographic position in the heart of Europe, bordering on Ukraine in the east, and Romania (now the EU) in the west. Proximity to the world markets promised prompt increase of trade volumes and prosperity for the small and open economy.

After a lengthy transition to market economy, at the turn of the 21st century Moldova finally demonstrated a stable and reasonably high economic growth. It joined the WTO and headed for the EU membership. However, the political crisis with the parliament's inability to elect the president over 2,5 years[7], and the unresolved separatist conflict in Transnistria promised no quick eurointegrational breakthrough for Moldova.

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[7] Moldovan parliament failed to elect a president several times between 2009 and 2012. On March 2012 Nicolae Timofti was elected President of Moldova.

Unlike Gagauzia that has put up with an "*autonomous territorial unit*" status, Transnistria proclaimed an own state "Pridnestrovskaya Moldavskaya Respublika" (PMR) with the capital in *Tiraspol* as early as in 1990, and on the 25th of August 1991 declared its *independence* from Moldova (for larger maps see Appendix 4). The Government in the Moldovan capital *Chisinau* refused to recognize the self-proclaimed separatist republic. Escalation of the conflict between the parent state of Moldova and the break-away territory led to the *War of Transnistria* in March 1992.

The war saw several severe fights between Moldovan troops and police (supported by Romanian volunteers) and Transnistrian irregular forces (backed by the Russian 14th army, Russian and Ukrainian volunteers). By different estimations, during the military conflict in March-July 1992, from nearly 300 to 500 people were shot and the number of wounded varied between 500 and 1300. The number of refugees and forcibly displaced persons reached 100 000 (Helsinki Watch 1993:4-5). On July 21, 1992 the *Moscow peace agreement* was signed, declaring a ceasefire and documenting some limited autonomy provisions for the break-away territory as the "autonomous territorial entity with special status". The agreement envisaged a Russian-led peacekeeping mission to observe the ceasefire, which is still present in the region (ICG 2004:4). Since then the foreign military presence has raised strong security concerns in Chisinau.

After the ceasefire agreement, the military conflict subsided into the phase of permanent *frozen conflict* with the secessionist region claiming its independence and the parent state refusing to recognize it. On the one hand, after July 1992 the situation remained relatively peaceful, with practically no casualties registered (accept few accidents). On the other, the frozen conflict has been preventing both full-fledged reforms and economic development in the region.

The PMR has never been recognized by any foreign country, except the three other Post Soviet separatist states – Abkhazia, Southern Ossetia and Nagorniy Karabakh. Despite the lack of international recognition, the PMR strives to acquire, preserve and strengthen all the attributes of a functioning parliamentary republic with its own president, government, parliament, police, and social care system. It has adopted an own constitution, flag, national anthem, and coat of arms, introduced its

own currency[8]. This has made Transnistria into the textbook example of a *de facto state* in the definition presented earlier in the thesis. Now, 20 years after the secession the political status of Transnistria still remains unresolved.

The citizens of Transnistria have learnt to live in the *status quo* of the frozen conflict, though. Since Transnistrian passports are not recognized anywhere in the world, along with Transnistrian, many hold Moldovan, Ukrainian or Russian citizenship and freely migrate to the neighboring countries either to work, to get an education or to receive medical treatment. The frozen nature of the conflict seems to provide the minimum conditions for existence.

Motives for Transnistrian secession have been widely discussed in the literature. At least three different reasonings could be singled out. One of them points to the *ethnic or historical nature* of the conflict (Kaufman 1996, Protsyk 2009). According to this point of view, the secession was caused by the fear of the mainly Slavic right bank of the Dniester river to be discriminated in allegedly Romanian influenced Moldova. *Economic benefit* is mentioned as an alternative motivation for secession (Isachenko 2009, Allin 2011). It is claimed, that with all the heavy industry concentrated in Transnistria, the region was reluctant "to sustain" the mainly agrarian "mainland". Further, as the situation stabilized into the frozen conflict, the status quo provided additional sources of income, including illegal, urging no reitengration. Another view points to the *geopolitical motivation* (Popescu 2006b). Russia's ambitions to extend its sphere of influence are often put behind the Russian support of Tiraspol's separatism and its former leader Igor Smirnov. Declaring the necessity to protect the Russian speaking population of Transnistria, the Russian military played in fact the crucial role in the military clashes of 1992, helping to establish de facto sovereignty of the PMR.

Notwithstanding the motives, Transnistria struggles for existence. Its government largely controls the territory, regularly conducts elections, builds up its statehood and documents economic development. At the same time, because of the loose legal status, the break-away region has turned into a free haven of contraband,

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[8]Transnistrian Ruble.

shadow offshore operations, and illegal immigration damaging economic interests and security of the neighboring countries, also in a wider European context. These developments raise regional concern and promote international mediation in the conflict resolution process.

Over 20 years that followed the secession, many attempts were made by different mediators to settle the conflict. No settlement plan, though, was accepted by the parties so far. The Russian Kozak Memorandum of 2003 (Memorandum Kozaka 2003), OSCE Settlement Proposals of 2004 (OSCE 2004), Yushchenko's Plan of 2005 (Kulyk and Yakushyk 2008) put forward by the Ukrainian President – all offering *reintegration* of the parent state and the secessionist entity despite the latter's claims for sovereignty – were all rejected. Since 2005 the negotiations were held in the so called 5+2 format, under the auspices of the OSCE, with Moldova and Transnistria as conflicting parties, Russia, Ukraine and the OSCE as mediators and the EU and the USA as observers. In 2006, after the referendum revealing an overwhelming popular support of the claim for independence[9], the negotiations came to a stalemate. Negotiations in the format of 5+2 were suspended (for detailed history of negotiations see ICG 2003, ICG 2004). A long period of some minor talks followed, until the year 2011 launched a new stage of the conflict settlement process, with a brief meeting of the negotiators in Moscow in September 2011. Presidential elections in Moldova in 2012, and the sunset of Igor Smirnov's political era in Transnistria in 2011, when the new president Evgeniy Shevchuk came to power, raised hopes for a new turn in the settlement of the conflict. Yet it is obvious that getting over the deadlock will be neither easy nor prompt.

1.2 Building Economy - Building the State

It is widely accepted that de facto statehood is a framework too fragile for sustainable economic development. Many point to destructive impact upon the secessionist region of the black or shadow economic activities (Isachenko 2009),

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[9] In September 2006, 97,2% of the voters that took part in the referendum answered "Yes" to the question "Do you support the course towards the independence of Transnistria and the subsequent free association with the Russian Federation?". The voter turnout was 78,6% (Newsru.com 2006).

organized crime (Lynch 2002), external pressure from "parent state" and international isolation (Caspersen 2009). On the contrary, Blakkisrud, Kolstø (2011) claim that living in the frozen conflict has given Transnistria the time not only to retain its de facto statehood, but also to launch an own state-building project. The main goal of state-building in de facto states, according to Blakkisrud and Kolstø (2011) is at least twofold: to grow strong preventing possible loss of resources gained with the secession and, subsequently, gain international recognition as a reward for the high political and economic performance.

The idea of state-building as a survival strategy for secessionist entities correlates with the neoconservative notion of *existential threat* in the international relations. Seeking international recognition as the final goal, de facto states face constant external "existential threats" in terms of reintegration with the "parent state", or loosing de facto sovereignty to a patron state. Internal threats, such as gradual subsiding into chaos due to the lack of legitimacy, pose yet another challenge (see, for example, Halabi 2009). Thus, in the face of both external and internal threats, *consolidation* of the secessionist entity's resources appears to be the only way at least to preserve the existing status quo, if not to play its card internationally.

Definition of state-building was first introduced by Tilly (1985). Since then this notion has been taking different shape, especially in connection of the era of peace-building launched at the turn of the millennium. Most of the definitions, however, boil down to a functional, *viable* state. Generally speaking, "*Key goals of state-building include effective delivery of basic goods and services through functional formal state institutions*" (Brinkerhoff 2007). Whereas, economy appears to be one of the key dimensions of the state-building process. Thus, according to Blakkisrud and Kolstø, "*state-building entails the development of the physical framework of the state: establishing control over territory and developing administrative structures, institutions, a capacity for taxation and redistribution of wealth*" as well as "*ability to facilitate economic development, collect taxes and tolls, and provide a minimum of social security for their population*" (Blakkisrud, Kolstø 2011: 184, 182).

As comes from the Blakkisrud and Kolstø's definition, state-building in the post secession phase is a goal in itself, the final outcome of any successful secession

project. Thus, creating a *viable economy* translates into an essential attribute of a functioning state. This echoes, for example, in the findings of Troebl (2003:963) on the Transnistrian conflict: *"Stützpfeiler des Staatlichkeitsstrebens der gesellschaftlichen Akteure in der ... Transnistrischen Moldauischen Republik ... sind eine auf Besitzstandswahrung bedachte Regionalelite, das wirtschaftliche Potential dieser hochindustrialisierten Region sowie mit politischer Unterstützung Moskaus erworbene militärische Machtmittel."*

Another pattern of post secession state-building arises from the theory of political economy of secession offered by Collier and Hoffler (2002). Drawing conclusions from B.Anderson's concept of "*imagined communities*[10] (1983) and the *theory of internal exit*[11] of Buchanan and Faith (1986), they note that: *"the common economic interest of the minority of the population that is rich… functions as the vital ingredient in identity politics. That is, secessionist political communities invent themselves when part of the population perceives secession to be economically advantageous."* A major focus falls here upon the "greed" motivation for secession, which makes the subsequent state-building process and creation of political identity into a mere tool of gaining economic benefits out of the sovereignty retained. From this point of view, the lack of political compromise in Transnistria's frozen conflict may be explained by the economic benefits stemming from the current status quo.

Governed either by the existential threat (grievance) or by economic advantage (greed), Transnistrian leaders have focused on gaining *economic viability* to build a functioning state. The same rhetoric was used for propaganda. Taiwan's economic achievements and even Timor Leste's experience have been repeatedly mentioned by Transnistrian officials in public speeches as an example to follow (Ignatiev 2012). Yet, the reality bears little resemblance of the Asian unrecognized island state. Lyndon (2011:7), for example, describes "*the uncertain viability of Transdni(e)strian economic actors whose business model depends on relationships*

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[10] Anderson claims that states are social constructs, imagined by the people who perceive themselves as part of the group. (Anderson 1993).

[11] According to the theory of internal exit, secession may occur when a rich region decides to retain income generated locally and refuses to pay taxes to the parent state (usually constituting the main source of its income).

with local authorities". Isachenko (2009) states that Transnistrian leaders have opted for "*the priority of the claim for statehood over economic viability*" (Isachenko 2009:74) and sacrificed economy for the political goals of separation.

Right before the secession the PMR accounted for 40% of Moldova's GDP and 90% of the electricity produced in the country (Allin 2011:1). Self-proclaimed on the territory of 4 100 sq. km (comparable to Cabo Verde or Trinidad and Tobago) with a population slightly more than half a million (constituting 13% of the total number of Moldovan residents), the break-away republic survived the 1990s in a severe economic crisis. In the beginning of the new millennium the situation stabilized, and in 2003-2008, before the global financial crisis, the annual GDP growth amounted to 9,6% on average, and growth of services in the GDP increased by 50-70% every year (Shelari 2010:2-3). In 2006-2008 the foreign trade volume more than doubled (Statistical Yearbook 2011:167). The efforts to introduce a monetary reform fairly succeeded, although Transnistrian ruble is only recognized in the break-away region. The positive achievements resulted from the *policies* – the state's massive stabilization and reform efforts, including ("crony") privatization, as well as the *economic structure* – strong industrial base inherited from the Soviet times. Additional considerable source of income is *remittances* of migrants, and *shadow economy*, mainly entailing re-export schemes or smuggling (Isachenko 2009b).

On the other hand, the PMR's small de facto economy is highly vulnerable to external factors. The economy is very open: in 2006-2010 foreign trade accounted for almost 270% of GDP on average (estimated on the basis of data provided in the Statistical Yearbook 2011), and therefore subject to volatility on the world markets.

Moldovan economist G.Shelari suggests that "the almost complete lack of internal resources for growth in the Transnistrian economy has determined its increased *vulnerability to external shocks*" (Shelari 2010:3). That is, the very *structure* of the PMR's economy adds up to the barriers preventing vigorous and stable economic development. The economic structure is, in fact, to a certain extent a product of *secession*: the highly industrialized, concentrated production pattern of the break-away republic with domination of export oriented industries and monopoly of a few

giant companies, considerably urbanized with little to no agricultural experience was from the very beginning of its history equipped with a set of structural handicaps.

Another source of Transnistria's vulnerability is the region's *de facto status* and the *frozen conflict setting*. For example, it is estimated, that immediate loss of the so called Ukrainian "economic blockade" in 2006 (when, according to an agreement between Moldova and Ukraine, all Transnistrian companies exporting goods through Ukrainian border had to register at the Moldovan customs authorities) amounted to 30,7 mln USD (6% of GDP in 2006) only during the first month after the regulations were introduced (RBK Ukraine 2006).

Very often, without legal possibilities to enter foreign markets directly, the unrecognized Transnistrian republic, highly dependent on foreign trade, has to *seek support of the parent or a patron state*. So, Transnistrian exporters were quick to (re-) establish contacts with Moldavian customs authorities in 2006. On the other hand, Russia regularly supports the PMR with "humanitarian aid". Also Ukraine and EU offer certain relief assistance. A separate topic is the PMR's energy debt to Russian Gazprom, three times higher than its GDP. Russia's mild position on the matter keeps this de facto state away from a default scenario. Seeking external support transforms de facto status from a handicap into an *asset*, traded in exchange for economic benefits, making the *frozen conflict* itself into a *source of resilience* of the region.

Along with the PMR's efforts to strengthen economy and build a functioning state, economic performance figures are often a token of the official propaganda. In the end of the day, a *viable economy* implies higher internal legitimacy, reveals success of the state-building project and, to crown all, promises a stronger position in the negotiations on the international recognition. Therefore, economic viability of Transnistria is largely disputed now, as has been disputed over the last 20 years. Transnistrians claim their economy is capable and use it as an argument of identity politics, while the parent Moldova presents alternative figures to prove Transnistrian economic decline, explaining its existence as Russia's mercy, and draw rosy pictures on reintegration of the economies. Different interpretations of the PMR's state-building performance invoke different assessments of its real position in the

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negotiations. Consequently, scenarios for the conflict settlement range from reintegration of the region into Moldova to its full independence.

To sum up, the question of Transnistria's *economic viability* appears to be crucial in the state-building and/or conflict settlement process, with the *vulnerability* of the PMR and the region's ability to cope with the handicaps brought into the focus of international discussions. How viable is the PMR as a sovereign economy in reality? How does it cope with vulnerabilities, including those induced by the frozen conflict? Has the situation changed over time that elapsed since secession, as suggested by Blakkisrud and Kolstø (2011)? Has the economy become viable enough to deem the state-building process successful and claim international recognition?

2 Theoretical Approaches to Viability of de facto Economy

Following the reflections outlined in the previous Chapter, the thesis will proceed by focusing on the economic dimension of Transnistria's state-building in the post secessionist stage. The research will attempt at examining the ability of the secessionist entity to consolidate a functioning or viable economy, and dynamics of this ability over the time that elapsed since secession. Pursuing a supplementary aim, the thesis will use the case of the PMR to elaborate a relevant research methodology to test the viability of de facto economy as such.

The pragmatic motivation behind the necessity to assess de facto economy's viability correlates with the two practical applications: to alarm the leaders of the secessionist region as well as international community about the future developments and measures to be taken, and to estimate the real positions of the conflicting parties in the settlement negotiations. Viability assessment is also useful for international donors willing to provide humanitarian relief in a frozen conflict situation.

2.1 Viability of Transnistria's Economy: Research and Knowledge Gaps

Secession has attracted comparatively little interest in the economic literature, with most of the studies devoted predominantly to the reasons for secession (Buchanan and Faith 1997, Fearon and van Houten 2002, Collier and Hoeffler 2002). Secessions that resulted in a frozen conflict were studied even less. Although the research on frozen conflicts has been considerably politicized, living in a frozen conflict entails a number of challenges for the economy, requiring separate studies. At the same time, economic viability of unrecognized entities has only recently fallen into the focus of scientific research, quantitative studies in the field still being rare.

The lack of comprehensive economic research on de facto statehood owe, on the one hand, to the modest role de facto states play on the world markets, and, on the other, to the complexity and specific background of the each case of secession. This, in

turn, explains domination of case studies in the field and the lack of a comprehensive theoretical research gathering general knowledge on de facto economies.

One of the first full-scale researches devoted to the economics of secession was offered by M.Bookman. According to Bookman (1993), there are three phases of secession, and economic issues are relevant in the study of each of them. The first implies the "cost and benefit analysis" before the secession as part of the motivations for breaking up with the parent state, the second envisages disentangling ties between the new independent economies in the process of secession, and the third post secession phase focuses on *economic viability of the region as an independent entity* (Bookman 1993:2-3). A major research question in the third phase, Bookman argues, is *what factors contribute to the success of a region's efforts to secede* or to the region's economic viability (Bookman 1993:3), which is defined as an "*ability to sustain growth in the aftermath of secession at the preindependence levels*" and should not be perplexed with self-sufficiency (Bookman 1993:145-146). The definition implies that viability is not providing for *survival* only, but also for *development* (*growth*). This thesis will adhere to Bookman's definition of economic viability as one of the most elaborated so far.

In her book "The Economics of Secession", Bookman provides an empirical study of 30 secessionist movements, using own methodology to "offer hypothesis pertaining to economic viability of the independent entities" (Bookman 1993:17). The methodology implies qualitative analysis of four variables effecting economic viability: the *level of economic development*, *trade dependency*, *net flows*, and the *degree of regional decentralization*. It should be noted, that the parameters listed are predominantly of *structural* nature.

Considerable contribution into the study of the economy of secessionist (and existing de facto) states was made by numerous case studies. Researches on different de facto economies derive viability of a secessionist unit from abundance in mineral resources, foreign trade, private remittances, and foreign aid (Huliaras 2002); human, technical and financial resources on the one hand, and growth-promoting policies on the other (Abed 1990); or substantial external support (Caspersen 2009). Bookman's findings, though, remain a single attempt to elaborate universal methodology to assess

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viability of de facto economy. Attempts to apply quantitative methods to assess economic viability of a secessionist entity have not been numerous either.

Similar trends prevail in the scientific research on Transnistria. The wave of scientific research that followed right after the War of Transnistria focused mainly on the motives for or roots of the secession (Roper 2004, Kolstø, Edemsky and Kalashnikova 1993). Literature dwelling on possible conflict resolution schemes dominated when settlement negotiations started (Lynch 2004, Protsyk 2006). Years later, the focus of scientific research shifted to the post-secession development (Caspersen 2009, Popescu 2006a) and the early signs of state-building in the unrecognized state (Troebst 2002, Blakkisrud and Kolstø 2011).

Economy has been touched upon in most of the studies on the PMR. A typical research paper on Transnistria lays a special focus on the scale of informal economy, dependence on Russia, and "greed" of the Transnistrian elite benefiting from the status quo induced by the frozen conflict. Although such studies provide a general picture of the region's economic performance, they tend to document the lack of self-sufficiency, rather than assess viability of the economy. De-masking Transnistrian sources of income or reflecting on its economic handicaps does not explain de facto existence (functioning) of the secessionist economy, neither does it say much on future developments.

The PMR's economic viability, on the contrary, has very rarely been chosen as an object of academic research. Close to find the clue to the quest on viability, Isachenko (2009) claims that survival of the PMR's economy rests with the very non-recognition. A more precise statement on economic viability of the PMR can be found in the research of Moldova-based Center for Strategic Studies and Reforms: "*it is possible to draw (a) paradoxical, at the first sight, conclusion: the economy of Transnistria is not self-sufficient but viable. At least, it is not more vulnerable than the economy of the Republic of Moldova*". The research also refers to de facto status of the PMR as a "profitable business" considerably contributing to viability (CSSR 2001:10). The conclusion is reached by exploring economic performance and sources of vulnerability ("informal" economy, concentration of industrial production, dependency

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on foreign trade) and predicting successful semi-autonomous existence of the region in the future.

Political scientists Troebst (2002, 2003) and Blakkisrud and Kolstø (2011) introduce a more comprehensive understanding of a facto state's economic viability, considering it as an integral part of the state-building project and implying authorities' efforts to speed up economic development despite the benefits of status quo. This calls for a deeper analysis of factors of economic viability in a separate economic research, as the question reaches beyond the scope of political science. It should also be noted, that in most of the previous studies, viability of the PMR's economy is addressed as a secondary or supplementary issue. In addition, researches apply predominantly qualitative methods. Whereas, quantitative methods would allow to maximally avoid biased reasoning in the abundance of propagandistic information. These facts add up to the need to explore viability of Transnistria's de facto economy.

This thesis addresses the economic viability in a wider context of state-building. The purpose of this research arouse from the lack of a comprehensive study on the issue and lack of an instrumental methodological approach to assess de facto economies. In order to fill in the research gap, the aim of the thesis it twofold: to estimate Transnistria's economic viability, and to elaborate a relevant quantitative method for the research, which can be generalized and applied to assess other secessionist economies developing under frozen conflict.

2.2 De Facto Economy: Transnistria as a Small Island Developing State

In search for a relevant methodology for a comprehensive research of de facto economy, it will be assumed that Transnistria is an island state. The assumption rests, in fact, upon solid analogies. Indeed, the break-away region clearly resembles an island state, or, to be precise, a *small island developing state* (SIDS). An unrecognized republic living in the frozen conflict is in most of the cases small. Like a small island country, it is both comparatively more isolated and vulnerable to exogenous factors than other states. It also tries to build a functioning economy constrained by the

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limited resources (natural, financial and human) and challenging (hostile) environment, bound to deal with market inefficiency, concentrated industry pattern, and high dependency on trade.

Perhaps the closest similarity lies in the vulnerability to external factors. Both small island states and de facto entities experience deteriorating impact of trade barriers. However, there is a strong difference in the character of the barriers: whereas de facto states are subject to embargos and other international sanctions due to their status or the frozen conflict setting, islands' trade is affected by natural disasters or long distances to main trading partners (or unfavorable conditions for transportation), which can be also ascribed to nature. Nevertheless, all of the disadvantages are largely beyond the state's control.

In addition, both rely on diaspora's *remittances*, and fore*ign aid* to compensate for their vulnerability. On the other hand, islands' isolation and *remote* location provide certain security stakes, which are lacking in de facto states. However, the frozen conflict does allow some "outsourcing" of the security functions to a parent state.

The definition of the small developing islands allows further identifying of similarities in the economic development. UN definition of SIDS stipulates that "*Small Island Developing States (SIDS) include low-lying coastal countries that share similar sustainable development challenges, including small population[12], limited resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, and excessive dependence on international trade. Their growth and development is often further stymied by high transportation and communication costs, disproportionately expensive public administration and infrastructure due to their small size, and little to no opportunity to create economies of scale*" (UNDESA 2012). Indeed, characterizing four Post Soviet separatist states (in Moldova, Georgia and Azerbaijan), Lynch underlines that "*they are completely isolated in international relations, and they all face deep internal problems and external threats to their existence*" (Lynch 2002:832). So, like SIDS, de facto states deal with the challenges of *vulnerability to external*

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[12] According to the UN, the small state is a state with population of not more than 1 mln. people.

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shocks (mainly trade-related, like exchange rates volatility, changes in tariffs or non-tariff regulations), *isolation* from other foreign countries, and *remoteness* (in terms of high trade costs which in de facto states are connected with trade embargoes or specific external measures to limit their trade). Other handicaps are derived from *smallness*: *limited resources* (even when an oil rich region secedes, dependency on one or few resources is detrimental for a small economy due to the dangers of the Dutch disease), *dependence on trade* (apart from common problems related to trade dependency, de facto states face also "political" challenges in this regard: they have to establish trade ties despite the lack of legitimacy and formal recognition by their trading partners; in most of the cases trade with the parent (and hostile) country is crucial for the economy, at least in the initial period after secession), *expensive public administration and infrastructure* (that is why de facto states, like SIDS, often "outsource" some governmental functions to patron or parent states, as, for example, medical treatment or higher education) and *lack of the possibilities to benefit from economies of scale*.

In addition to vulnerability comparison, interesting conclusions arise from the reflections on the *advantages* of being a small island versus living in the non-recognition. According to the UN, "*small island developing states have valuable resources, including oceans, coastal environments, biodiversity and, most importantly, human resources*" (UN 1994a). If a small island may benefit from the surrounding sea (due to its attraction as a tourist destination and its rich marine resources), which is at the same time contributing to its *vulnerability* (being the source of tsunami, on the one hand, and isolation from the rest of the world, on the other), a de facto state may also draw benefits from dealing with the (hostile) surrounding states. This often implies, however, engaging in half-legal or illegal activities like smuggling, re-export schemes or money laundering. On the other hand, according to Azzopardi (2004:810), a characteristic feature of most small islands is their unique specialization on the basis of a *"niche" comparative advantage* (serving as tax havens, tourist attractions or even trading votes in the international organizations). De facto states also survive by some narrow export specialization, as listed by Pegg (2008:3): metallurgy and steel industry in Transnistria, livestock exports from Somaliland and tourism in Northern Cyprus.

Small island states' *diplomacy style* (explored in Cooper and Shaw 2009, Prasad 2004) echoes in the unrecognized republics' international policy as well: economic fragility argument is equally used to attract foreign aid. In addition, de facto states may benefit from *de facto status* (providing, for example, space for geopolitical maneuver), as island states may trade with their sovereignty (serving as tax havens or offering flags of convenience for ships).

All in all, de facto states and small islands suffer and benefit from mainly similar phenomena. The difference lies in the reasons causing these phenomena: if unrecognized states suffer from conditions caused by the frozen conflict situation, broken ties with its parent state, structural legacy of the secession and lack of legitimacy, small islands struggle to survive in the conditions shaped primarily by the fragile natural environments.

Interestingly enough, Armstrong and Read (2003) draw a parallel between the challenges of the small islands and small *landlocked countries[13]*, which also corresponds with de facto states that in most of the cases have no access to the sea and face higher transportation costs due to international isolation.

The close similarities between de facto states and SIDS justify the application of the methodology developed for SIDS to assess a de facto economy. At least two limitations should be kept in mind, though: first, the factors influencing the economic growth in both types of states/entities are of different origin and causality, and therefore should be interpreted accordingly; second, de facto status formally does not allow comparison with sovereign states (for various reasons described in the Chapter 3), so the results obtained in the quantitative research (using methodology developed originally for SIDS) should be combined with a comprehensive qualitative analysis. The third limitation is the very assumption that de facto states are island states. While an island state has no opportunity to escape its islandness or smallness, a de facto state may avert its international isolation and other adverse exogenous factors either by gaining an international recognition or reintegrating with the parent state. Final

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[13] Landlocked countries, according to the UN, are characterized by the lack of territorial access to the sea, remoteness and isolation from world markets and high transit costs (UN High Representative for LDCs, LLDCs and SIDS 2012).

settlement of a frozen conflict makes the island assumptions no longer applicable. This study thesis sets limitations of "permanent islandness" and hence, explores living under frozen conflict with de facto status as a non-reversible condition.

2.3 Vulnerability and Resilience as Viability Measure: Main Theories

By contrast to de facto economies, small islands' economic performance has drawn much attention. A comparatively intense scientific interest can be explained by the number of the small island developing states in the world, amounting to 52 in 2012 (UN High Representative for LDCs, LLDCs and SIDS 2012), their increased vulnerability and pressure for foreign assistance to compensate for handicaps like isolation, remoteness and exposure to natural shocks.

Generally, studies on the small island state economies have been evolving in two main directions, surprisingly contradicting each other. Predominant economic research (Streeten 1993, Briguglio 1995, Witter 2002, Farrugia 2004, Briguglio et al 2008) explores SIDS economies within the *vulnerability discourse*, also shared by the UN and most international organizations. Referring to the research on small economies introduced by Kuznets (1960), they claim that small island developing states are more vulnerable than other countries, while the successful economic development of some SIDS is explained by their ability to resist the deteriorating impact of the (inherent) vulnerability sources and recover after adverse shocks – (nurtured) *resilience,* or copying ability (Briguglio et al 2008, Farrugia 2004, Witter 2004). According to Malta-based economist Briguglio and his associates (Briguglio et al 2008:2), "*economic vulnerability is ascribed to inherent conditions affecting a country's exposure to exogenous shocks, while economic resilience is associated with actions undertaken by policy-makers and private economic agents which enable a country to withstand or recover from the negative effects of shocks*". Encouraged by the corresponding UN call, the composite *Economic Vulnerability Index* was introduced to measure *structural vulnerability* of SIDS economies (Briguglio 1995) and the *Economic Resilience Index* – to assess their *copying ability* (Briguglio et al 2008). By

contrasting the EVI and ERI scores, Briguglio et al predicted four scenarios of economic development of the economy: worst case scenario (high vulnerability, low resilience), "self-made" scenario (high vulnerability, high resilience), "prodigal-son" scenario (low vulnerability, low resilience), and best-case scenario (low vulnerability, high resilience) (Briguglio et al 2008:2-3). Implying that vulnerability and resilience define a country's future, these theoretical reflections, in fact, explore the *economic viability* of SIDS, even though this angle of research was seldom elaborated on (the notable exemption being the paper by Azzopardi 2004).

Another strand of economic literature, on the contrary, rejects vulnerability as a determinant of SIDS' economy, using the impressive economic growth of some small states as an argument. Their studies question the negative impact of *smallness* and *islandness* on economic development. As Srinivasan (1986:218) puts it, "*smallness is neither necessary nor sufficient condition for poor development performance*". Finding evidence of SIDS' increased vulnerability, they document that this is a hindrance to a sustained economic growth. Armstrong and Read (2003) claim that "*…economies of small states are especially prone to the destabilizing effects of exogenous economic shocks*" (Armstrong and Read 2003:108) and that "*economic growth success in small states is very much a dynamic outcome of the use of appropriate economic policies founded upon their particular strengths and which limit or offset the adverse effects of their small size*" (Armstrong and Read 2003:117). Other researchers go further arguing that *smallness* and *islandness* is not a disadvantage at all, and pointing to the small states ability to "*reap benefits of trade openness*" and "*take advantage of the international risk sharing*" (Easterly and Kraay 2000:2014). This approach describes small island states first and foremost as a beautiful "*paradise*" bearing the air of romanticism of the literary masterpieces by D.Defo and J.Swift (Baldacchino 2004), benefiting from its exotic allure. It is also argued that in the 21st century "*a considerable emphasis is placed on individual actor-ness*", therefore small island states try to build up specific *"economic niches"* (Cooper and Shaw 2009:4) despite the limited resources and other obvious handicaps.

Within the *"paradise for sale"* discourse, three models of SIDS economic development have urged vigorous scientific discussions: PROFIT, MIRAB and SITE

models. The PROFIT model (standing for People, Resource management, Overseas issues, Finance and Transportation) introduced by Baldacchino (2004), explores the impact of the five sources of survival for SIDS. The MIRAB (Migration, Remittances, Aid and Bureaucracy) model explains small islands economic development by revisiting the role of *remittances* for economy and underlining that the islanders have been the strongest per capita aid beneficiaries in the world (Bertram and Watters 1985, Bertram 1999). While the SITE model (Small Island Tourist Economies) underlines the benefits of tourism for SIDS economies (McElroy 2006).

Among other theoretic reflections on small island states, Bertram's findings on *"the convergence of small island economies with their metropolitan patrons"* (2004) are also worth mentioning in the context of this research. Analyzing island economies worldwide, Bertram has proven that economic growth of small island states depends mainly on two variables: dependence on a corresponding metropolitan patron country and the patron's GDP per capita. His regression analysis of the Pacific small island economies proved a *"particularly strong association between political dependence and high per capita GDP"* stating that *"there has been no tendency for island economies to converge to one another, but there have been strong tendencies for them to converge with their patrons"* (Bertram 2004:352-353). A study by Armstrong and Read (2000), in turn, has shown that dependent territories exhibit superior GNP per capita, if compared to sovereign microstates. If dependence on a rich and growing patron economy is positively correlated with the island's economic growth, it does so with the pattern of the island's economic viability as well. A de facto economy is in most of the cases also dependent on a patron state, both politically and financially: Transnistria's almost 70% budget deficit is covered by Russian foreign aid (Kulyk 2012, April 20); Turkey supports Northern Cyprus with 400 mln. USD every year (Turkish Daily News 2007, April 5), which is roughly 15% of its budget. Although additional studies are to be conducted to conclude on de facto states' economic convergence with their patron states, assumptions introduced previously in the thesis allow application of the theory to the study of Transnistria's economy, taking into account limitations defined in Section 2.2. The factor of dependency introduces an interesting aspect of the research, as it is, in fact, a source of both vulnerability

(dependence on external powers increases exposure) and resilience (providing additional source of income in return for political dividends) at the same time.

Indeed, the advantages explored in all the three models presented above, are nothing else but sources of *resilience*, introduced by Briguglio et al (2008), the ability to offset the adverse exogenous shocks. Recognizing the role of nurtured advantages of Transnistrian economy (remittances, foreign support, flexibility or adaptability of businesses), the impact of vulnerability should not be underestimated. Since the intersection of economic vulnerability and resilience define the SIDS' economic development, hence also their *economic viability,* the same "intersection" analysis will be employed in the thesis to reveal the viability of Transnistria's de facto economy. Theoretical findings of "the paradise for sale" discourse will also be used to address the "individual actor-ness" of the PMR's economy. Whereas, Bertram's conclusions on economic convergence of island economies with their patron countries will be applied to reveal another specific dimension of viability of Transnistrian economy developing under frozen conflict.

3 Methodology for the Estimation of Transnistria's Economic Viability

As suggested in the previous Chapter, economic viability of Transnsitria may be assessed though the juxtaposition of structural economic vulnerability and economic resilience – notions introduced by Briguglio (1995, 2002). On the technical level, his methodological findings led to development of an Economic Vulnerability Index to measure vulnerability, while resilience was proxied by GDP per capita or other socio-economic indicators for quantitative comparisons with vulnerability scores (Briguglio 1995, Briguglio and Galea 2003). Later also an *Economic Resilience Index* was developed (Briguglio et al 2008).

This methodology has been widely criticized for lacking clear structure and validity (for example, see Armstrong and Read 2003). Therefore, an alternative composition of an Economic Vulnerability Index for Transnistria will be considered further in the thesis, as well as a relevant method to estimate resilience of Transnistrian economy will be suggested and described. This will be, however, done within the theoretical framework elaborated by Briguglio and presented in the previous chapter.

Finally, Briguglio's approach to categorize economy by its vulnerability and resilience, as estimates of its economic viability, will be closer discussed.

3.1 Measuring Economic Vulnerability

3.1.1 The History of The Economic Vulnerability Index

Almost two decades ago, vulnerability of small island developing states urged vigorous academic research aimed at elaborating a credible and convenient universal tool to measure the scale of economy's exposure. Researches were launched, both independently and under the auspices of international organizations, to develop a composite index that would allow classification of countries by their vulnerability profile. The importance of a quantitative indicator of vulnerability was first officially recognized in the Barbados Program of Action adopted at the first Global Conference

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on Sustainable Development of SIDS in Barbados in 1994: *"Small island developing States, in cooperation with national, regional and international organizations and research centres, should continue work on the development of vulnerability indices and other indicators that reflect the status of small island developing States and integrate ecological fragility and economic vulnerability."* (UN 1994a).

One of the earliest indexes was introduced by Briguglio (1995) who suggested an Economic Vulnerability Index composed of three indicators: exposure to foreign economic conditions (economic openness), insularity and remoteness, and proneness to natural disasters. Exposure to foreign economic conditions was measured by the degree to which an economy depends on foreign trade (the ratio of exports and imports to GDP). Insularity and remoteness in the EVI developed by Briguglio was proxied by the ratio of transport costs to exports. Finally, the proneness to natural disasters was estimated by the *disaster damage* calculated as money damage in relation to GDP of the country concerned (Briguglio 1995:1618-1620).

Briguglio's choice of components for the index was to a certain degree subjective, which was partly admitted by the researcher himself, although he maintained to be guided by considerations of *simplicity*, *ease of comprehension*, and *suitability for international comparison* (1995:1618-1619). In view of the index's poor methodological structure, it was not recognized as a universal index for the UN use, and further studies were encouraged by the organization.

Four years later, in 1999, Committee for Development Policy (CDP) of the UN Department of Economic and Social Affairs took a decision to launch own studies on construction of a vulnerability index, primarily as one of the three criteria[14] identifying least developed countries (LDCs), but also aimed at measuring SIDS' vulnerability. The UN Millennium Declaration reiterated the need of a special index tailored to define SIDS vulnerability: *"We also resolve to address the special needs of small island developing States, by implementing the Barbados Programme of Action ... We urge the international community to ensure that, in the development of a vulnerability index, the special needs of small island developing States are taken into*

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[14] LDCs are currently identified by the EVI, Human Assets Index (HAI) and Gross National Income (GNI) per capita scores (UNDESA:2008).

account." (UN 2000). In 1999, the UN Committee for Development Policy designed the Economic Vulnerability Index, used for the UN triennial review of the list of LDCs in 2000. The index was further refined for the reviews of 2003, 2006, 2009 and 2012.

Further comprehensive theoretical studies on the rationale of the EVI developed by the UN CDP were led by French economist P.Guillaumont (2004, 2007a, 2007b, 2009, 2011). Reflecting on the index's components, Guillaumont defined the concept of economic vulnerability, explained major implications of the EVI's composition, and introduced some methodological refinements. Exploring applicability of the EVI, Guillaumont designed a retrospective EVI index (2007a), further refined by his colleague Cariolle (2011a), allowing to trace dynamics of economic vulnerability over a certain period of time. The two researchers computed retrospective EVI indexes for all the UN member countries in the period of 1975-2009, and provided analysis of the time series obtained (Cariolle and Guillaumont 2011).

Taking into consideration the research objective of the thesis, the retrospective EVI was chosen as the most relevant for the estimation of Transnistria's vulnerability dynamics after secession. Thus, the methodological framework developed by the UN and refined by Guillamont and Cariolle will serve as main referential guidelines for the calculations described in the next Section.

Before proceeding to the components of the Economic Vulnerability Index, the concept of structural economic vulnerability has to be elaborated on.

3.1.2 The Concept of Structural Economic Vulnerability

The Economic Vulnerability Index, as developed by the UN CDP, measures *structural* economic vulnerability or "*structural handicaps to economic growth*" (Guillaumont 2009:5). Also Briguglio's index was designed to capture structural characteristics of the economy influencing economic development, although it failed to choose relevant components to filter out purely structural factors.

According to Guillaumont (2009:4-5), *structural economic vulnerability* results from factors that are independent from a country's current political will (*exogenous*) and should be distinguished from *vulnerability deriving from policy*, which results from present political choices (mainly captured in the concept of

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resilience, opposite in meaning, outlined in Section 3.2), and *state fragility* stemming from bad policies and weak institutions. Indeed, structural features of the economy (like pattern of industrial production or export specialization) are more rigid and deep-rooted, therefore less subject to change or reversal. Correspondingly, it is important to distinguish between structural and policy-induced factors affecting economic growth.

The strand of literature exploring the EVI designed by the UNCDP perceives structural economic vulnerability as the result of two main sources: the size and frequency of the *exogenous shocks* either observed or anticipated, and the country's *exposure* to them. These two dimensions of vulnerability constitute the conceptual basis of the EVI. Combined analysis of Witter and Briguglio (2002) and Guillaumont (2009) gives the most comprehensive account of the vulnerability sources captured in the EVI index, which could be mapped in the following table:

Table 3.1.2 Sources of Structural Vulnerability

Sources of Vulnerability		Possible Negative Implications for Economic Growth
Exposure	Smallness	High economic openness, Diseconomies of scale, Less diversified economy, Less efficiency, Higher governmental expenditures, Limited resources, Inability to influence world prices
	Location	High transport costs (per unit), Uncertainties of supply
	Specialization	High dependence on narrow range of exports, Dependence on the volatility of external demand
Shocks	Natural Shocks	High mortality, Homelessness, Production disruption in the result of natural disasters, Instability of primary sector industries (depending on weather conditions), Decreasing food security
	Trade Shocks	Instability of trade flows, High dependence on trade taxes, Dependence on strategic imports (e.g. energy), Volatility of Remittances

Smallness stipulates that SIDS face higher risk of external shocks and lower ability for recovery. Since most de facto states are small, the numerous implications for the economic growth presented in Table 3 refer de facto economies as well.

Despite obvious security advantages, *location* of island states may stand for another handicap. Located often in many thousand kilometers from the continent, SIDS face higher barriers to trade (in terms of transportation costs, time etc) and more intense labor force migration, neither are there opportunities for border trade, so beneficial for border regions in many continental countries. Another source of vulnerability is the lack of immediate rescue opportunities in case of natural disasters. For de facto states living under frozen conflict, location implies bordering on

"enemies" or living in a "hostile" environment, which also increases indirect costs for transportation and logistics (predefined routes or border crossings, additional checks).

SIDS are often dependent on a limited number of export industries that, in turn, define misbalanced internal production structure. Influencing the trade pattern, *specialization* reflects vulnerabilities equally eminent in SIDS and de facto states.

SIDS's proneness to *natural shocks* is well documented and discussed earlier in Chapter 2. De facto states also may be subject to natural disasters, and their small agricultural sectors are vulnerable to changing weather conditions as well. However, the scale of vulnerability due to natural shocks does not necessarily depend on the geographic position only. If assumed that natural shock refers to any catastrophe beyond de facto state's control, also damage induced by the immediate conflict following the secession and the frozen conflict evolving further may qualify to assess natural shocks' impact on economic growth.

Trade shocks are usually high for small island developing states. They are destined to follow volatility of external demand, and protectionist measures would have little to no effect on the merchandise trade pattern. The unrecognized states also suffer from instability of foreign trade, as their status and the frozen conflict setting may cause trade sanctions or other trade barriers.

Finally, de facto states' structural economic vulnerabilities may stem from some specific sources, not typical for SIDS. Smallness, concentrated production pattern, narrow export specialization often result from secession from the parent state (*post-secession*), while others are *status and frozen conflict induced* – like international isolation resulting in trade instability or additional transportation costs.

To sum up, it is important to underline that the concept of the structural economic vulnerability is surprisingly instrumental for assessment of de facto economies. For unrecognized state, it is important that *policy-induced* factors are excluded from the scope of the EVI. Focus on exogenous indicators makes it possible to avoid assessment of de facto government's policies (often corrupt or inefficient), but rather estimate the very ability of the break-away region to survive and develop. So, if calculated for de facto state, the EVI also captures vulnerability arising from *post-secession structural handicaps* and vulnerability *induced by de facto status and*

frozen conflict. Calculation of the EVI index for Transnistria will serve to estimate its overall structural economic vulnerability, including the impact of its secession from the rest of Moldova and subsequent international isolation on its economic growth.

3.1.3 The EVI Components

As shown earlier, the *Economic Vulnerability Index* estimates the frequency of adverse events that disrupt the economy and the magnitude of damage they cause (*shock*), as well as structural characteristics of the economy implying the risk for the country to be exposed to such shocks (*exposure*). It comprises seven major *exogenous factors* that affect economic growth and prevent poverty alleviation, not resulting from "bad policies" and being beyond a country's control:

Table 3.1.3 Composition of the Economic Vulnerability Index
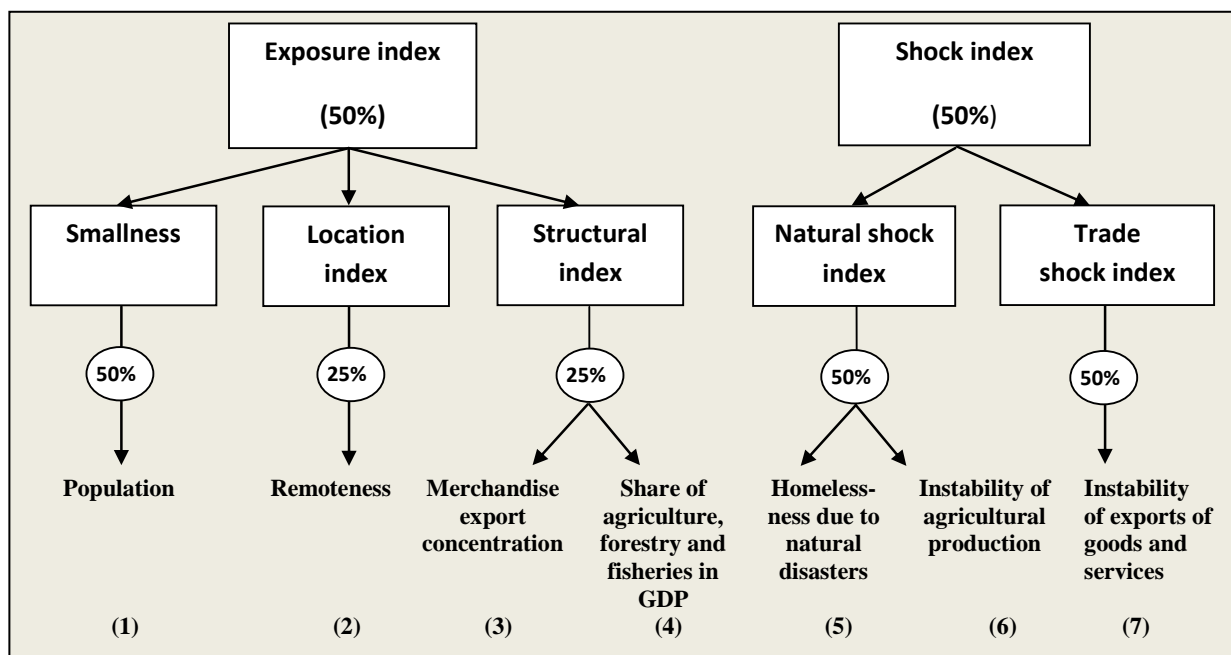
The weights of the EVI components have been defined by UNDESA (2008). When estimated, all the EVI components are subject to a max-min *normalization procedure* according to the formula: **I=[(Value-Min)/(Max-Min)]*100** (all components except for the Population) and **II=[(Min-Value)/(Max-Min)]*100** (for Population score, which is in negative relation to vulnerability: the higher the population, the higher ability of the country to stand the shocks and thus the lower

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vulnerability) (Cariolle 2011a:8). Values stand for the data observed or indicators calculated, Max and Min represent the highest and lowest value observed across the reference countries in the same period of time (Max and Min values used by UNCDP for triennial review 2009 and applied in this research are given in Appendix 1). (I) and (II) are the new rescaled indices with values ranging from 0 to 100 (UNDESA 2008:42-43). Thus, the components of the EVI are transformed into *relative indices* showing the country's vulnerability *in comparison with* the rest of the world.

Exposure index: Smallness

- *(1) Population*

The UN CDP chose population as a proxy for smallness. The Smallness component is measured by the logarithm of the number of the country's inhabitants normalized in a max/min procedure (UNDESA 2008:49-50). The calculation may be described by the following formula:

S=[(Min-Ln(Population))/(Max-Min)]*100 (1)

Exposure index: Location index

- *(2) Remoteness*

The Location indicator in the EVI is proxied by "the minimum average trade-weighted distance from the world markets" (UNDESA 2008:50-51). The latter is defined when physical distances between the capital of the respective country and main trading countries in the world (top exporters) are multiplied by the top exporters' share in the total world exports and then added up until their cumulative share in the world exports constitute at least 50% of the world market (UNDESA 2008:50). Then the combination of the minimal trade-weighted distances is identified[15]. This combination is transformed into logarithms, and normalized.

Since landlocked countries face different difficulties (and with no immediate access to the sea as the cheapest logistic solution, the countries bear higher transportation costs) the Location component is adjusted by 15%[16] if measure for a landlocked country.

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[15] Cariolle set up the 33% threshold for the world market share in calculating the retrospective EVI (Cariolle 2011:11), which will be also applied for computing the EVI for Transnistria.

[16] If it were regarded as sovereign, Transnistrian economy would qualify as landlocked country.

The series of calculations could be described by the following formula:

$$L=[(Ln(MIN(\Sigma(D_{ti}*exp_i/Exp), \text{ if } \Sigma(exp_i/Exp) \geq 0,33)]*0,85 + 0,15L) - Min)/(Max-Min)]*100 \quad (2),$$ where:

D_{ti} – distance from the country's capital to capitals of world's top exporters,

exp_i/Exp_i – share of the top world's exporters in the world's exports,

L – dummy[17] equaling 1 when the country is landlocked, and 0 when it is not.

Exposure index: Structural index

This component of the EVI reflects the structure of the country's GDP and exports as constituting parts of its vulnerability profile.

- *(3) Merchandize export concentration*

UN's EVI methodology employs the Herfindahl-Hirschmann index (HHI) to calculate the export concentration using the shares of the product categories of the Standard International Trade Classification (SITC) at the three-digit level in total exports (UNDESA 2008:51). The HHI normally measures market concentration and competition, estimating the average market shares of the companies acting on the market in focus, thus describing the concentration of the market and reveals its market *structure* (Bennett and Wei 2006). In view of this fact, the rationale behind using the HHI's formula for this component of the EVI reflects the necessity to catch the country's dependency on some particular industry (industries) and the level of trade and industry diversification. High figures for such dependency reveal a structural economic handicap as SIDS' higher exposure to one industry (or limited number of) induce market volatility. The UN suggests this formula to estimate the component:

$$H=(\sqrt{[\Sigma(x_i/X_t)^2]} - \sqrt{[1/n]}) / (1-\sqrt{[1/n]}) \quad (3), \text{ where}$$

H – merchandise export concentration,

x_i/X_t – share of exports of the product *i* in total exports,

n – number of products exported at the the three-digit SITC level.

The score obtained in the calculations is then normalized through the min-max procedure described earlier.

- *(4) Share of agriculture, forestry and fisheries in GDP*

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[17] Introduced by Cariolle (2011).

A country's vulnerability is directly related to the share of primary industries in GDP (UNDESA 2008:52). For the EVI only these industries were chosen, as they are most dependent on weather or climate conditions (exogenous factors), while other industries making use of natural resources (like oil and gas extraction) were not considered, presuming that benefits of the mineral resources are more influenced by internal policies than external factors. The formula for the component (4) is the following:

$A=a_t/GDP_t$ (4), where

a_t – value of agricultural, fisheries and forestry production output,

GDP – gross domestic product in current prices.

Shock index

The shock component of the EVI falls into two subcategories – *natural shock index* proxied by the number of people who became homeless due to natural disasters (droughts, tsunami or typhoons), and *trade shock index*, estimated by instability of agricultural production (due to smallness, seasonal fall in crops impacts SIDS food security preventing growth) and instability of exports (both goods and services are included, as SIDS often depend on tourism). Trade index reflects possible impact of openness on economic growth, so typical for small countries.

Shock index: natural shock index

-    *(5) Homelessness due to natural disasters*

Homelessness due to natural disasters is measured by the share of the population displaced in the result of natural disasters over a period of time (UNDESA 2008:53). Where natural disasters are defined as "*a situation or event, which overwhelms local capacity, necessitating a request at the national or international level for assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering*" (UNDESA 2008:70). In the UN CDP's review of 2009, data series for calculation of Homelessness stood for the number of the homeless due to natural disasters during 1990-2007 divided by the national population during the middle of the period – 1998/99 (Cariolle 2011a:13-14).

Homelessness=$[\Sigma_{1,n}(D)]/P_{n/2}$,   **(5), where**

D – number of homeless people,

n – number of years in the period considered,

$P_{n/2}$ – population of the country during the middle of the time period considered.

The component estimates human costs of natural disasters, and therefore, the impact of the natural disasters on the human capital-induced economic growth.[18]

- *(6) Instability of agricultural production*

Instability of agricultural production is another component of the natural shock index. UN calculates the instability by employing the log-linear regression of a trend equation for the agricultural production index (UNDESA 2008:54):

$logY=\alpha + \beta logY_{t-1} + \gamma t + e_t$[19]   **(6),** where

Y – the agricultural production index,

α - intersection of the regression line,

t – time variable, and

standard error $S=\sqrt{[(\Sigma e_t^2)/(n-1)]}$ normalized in the min-max procedure gives the indication of the Instability of agricultural production.

Shock index: trade shock index

- *(7) Instability of exports of goods and services*

Similarly, the following log-linear regression is used to estimate the instability of exports of goods and services:

$logX=\alpha + \beta logX_{t-1} + \gamma t + e_t$[20]   **(7),**   where

X – total value of exports of goods and services deflated by import unit values[21],

α - intersection of the regression line,

t – time variable, and

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[18] Several attempts were made to better grasp the meaning of the component. In 2011 UN decided to proxy the human dimension of the natural shocks indicator by victims of natural disasters, or "people killed or affected" (UNDESA 2011). This renewed parameter will be used for the UN CDP review 2012.

[19] If the log-linear regression is calculated for Transnistria in the period of 2001-2010, *[βlogYt-1]* is insignificant, approaching zero. This is due to the comparatively short period of existence of this de facto state, that do not allow tracing the impact of the previous year's crops on the subsequent year's output volumes. Thus, if applied to Transnistria, the above given formula will be transformed into $logY=\alpha + \beta t + e_t$.

[20] For Transnistria the formula $logX=\alpha + \beta t + e_t$ will be used, for the same reasons as for the component (6).

[21] Import Unit Values statistics is provided by the IMF and World Bank Financial Statistics.

standard error $S=\sqrt{[(\Sigma e_t^2)/(n-1)]}$ normalized in the min-max procedure gives the indication of the Instability of exports of goods and services.

A weighted sum of all the parameters (1) – (7) gives the EVI score for the corresponding year.

3.1.4 Applying the EVI Methodology to a de facto State

It is important to revisit here the dilemma of unrecognized states in the international law. Engaging in economic cooperation with de facto states, international community does not include them in the international legal system, though. Thus, no international statistics covers de facto states data, nor are composite indicators calculated for these entities. By contrast, "national" statistics of the states is developed with utmost diligence – partly with the support from different aid programs financed by international organizations to increase transparency and ensure strategic planning of conflict settlement, and partly by the secession advocates themselves, as an additional tool of identity creation and state-building.

For example, United Nations Development Programme (UNDP) and the World Bank have been assisting Somaliland to gather macroeconomic and social economic indicators on the secessionist region to "*keep track of socio-economic developments in conflict and post-conflict countries*" and in order to "*prepare timely and effective strategy to support post-conflict interventions*" (Somaliland in Figures 2003). State statistical bodies of the unrecognized republics of Southern Ossetia and Abkhazia are supported by Russia to conduct calculations of macroeconomic indicators (Protocol 2009, February 27th; Protocol 2009, February 29th).

Moreover, there have been many attempts of de facto entities to apply the UN, World Bank or IMF methodology and compute social and economic composite indices. Thus, for example, the Republic of China (Taiwan) has been calculating its HDI index (Human Development Index) since 1992 using the UNDP methodology (DGBAS 2012). UNDP estimates the HDI for Palestina since late 1990s, despite questionable status of Palestinian territories (UNDP 2004). The EVI has never been calculated for a de facto state. However, Naudé et al (2008) applied the EVI

methodology to measure vulnerability on a subnational level, constructing a local vulnerability index (LVI) for various districts of South Africa.

However, estimation of composite social and economic indicators for de facto states poses a number of challenges. The main of them being (non)*availability* of statistical data, (poor) *validity* of the data available, and (in)*comparability* of the estimated indicators with parameters of other (sovereign) states. Due to poor infrastructure or lack of expertise, gathering of statistical data in the unrecognized state is notoriously challenging. Data may be unavailable simply because of lack of registration routines. Once gathered, statistical data may lack validity. Propensity of the unrecognized governments to politicize statistics may result in extensive data rigging. Lack of experience and knowledge in processing of statistical information may also affect data validity. Nevertheless, these challenges are encountered in all the countries with poor governance. They cannot be a hindrance preventing statistical research, but rather a limitation to the findings obtained.

Unlike the previous two, the challenge of (non)*comparability* is the sole product of de facto status. Technically, limited sovereignty does not allow comparisons with sovereign members of the UN on equal terms. But even leaving the difference in definitions aside, de facto existence does impact statistics. It interferes with terms of trade, as trading partners have to take into account embargos, increased tariffs, or non-tariff barriers to trade. De facto states face market inefficiency due to lack of transparency and specific economic structure[22]. This leads to distortions of macroeconomic indicators. In addition, when state functions of a de facto state are outsourced from a patron or neighboring country, their statistical estimation would, in fact, be a study of some other country's performance (or indirectly, de facto state's *dependence* on a patron state[23]). Thus, if compared with other (sovereign) countries, composite indices calculated for de facto states should be interpreted with a careful approach.

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[22] As a legacy of the "pre-secession" heritage, economic structure of de facto states may suffer from regional planning of the parent state in the past (with unbalanced priorities for particular industries, extension of production cycles far beyond the region etc).

[23] More reflections on de facto state's dependence and its assessment are given in Sections 2.3. and 3.3.

3.2 Defining Economic Resilience

3.2.1 The Concept of Resilience

Briguglio et al (2006:6-7) explain resilience as the ability of an economy to recover quickly after adverse shocks (shock counteraction), and the ability of an economy to adjust to the negative impacts of external economic shocks (shock absorption). His understanding of the concept considers it as *nurtured* ability, by contrast to structural economic vulnerability, which is *inherent*. Similar definition of the concept is suggested by Guillaumont and Guillaumont Jeanneney (2011) who perceive resilience as *policy-induced* (non-structural, and therefore more reversible) ability to accommodate adverse external impacts.

The *nurtured* character of resilience points to the possibility to influence the structural economic vulnerability by means of resilience, or, to be precise, through *resilience building*. As Briguglio et al (2006:6) argue: *"...vulnerable states should not be complacent in the face of their economic vulnerability, but could, or should, adopt policy measures to enable them to improve their ability to cope with external shocks"*. As an evidence to possibility of success despite structural disadvantages, the paper considers the *Singapore paradox*, an example when resilience building policies of the island overweighed handicaps stemming from smallness (islandness), and provided for the impressive economic growth.

It should be noted, that due to reversibility, resilience exerts most impact on dynamics of the economic viability (presuming that another component of viability – structural economic vulnerability – is more "rigid"). Thus, it is resilience sources that contribute most to keep up de facto state's existence. Taking this in consideration, conclusions in the result of current research depend largely on the assessment of the *nurtured* dimension of viability.

The ability of resilience to be built by policies, and more importantly, to be increased, clearly corresponds with the theoretical findings of SIDS researchers outlined in Section 2.3. As discussed earlier in the thesis, the three main theories considered (MIRAB, PROFIT and SITE) either point to specific *economic niches* that are built up to foster economic growth (tourism, financial services), or other specific

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individual sources of resilience (human capital, remittances, foreign aid, adaptability of businesses). These advantages may also be classified as *nurtured*.

Finally, it should be noted, that policy-induced resilience cannot totally exclude structural elements, as it may to a certain degree depend on the existing (*inherent*) framework for decision-making. The distinction between economic resilience and structural economic vulnerability is provisory and is strictly categorized mainly for methodological purposes.

3.2.2 Identifying Methods to Assess Resilience of Transnistrian economy

Following the studies dedicated to the design of the EVI index, Briguglio et al (2006) constructed an Economic Resilience index, including four variables capturing shock absorbing and shock counteracting elements: (1) macroeconomic stability; (2) microeconomic market efficiency; (3) good political governance; (4) social and environmental conditions. Whereby, each variable is proxied by several components, which will be discussed later. As suggested earlier, along with the four resilience variables listed, a fifth parameter is to be introduced in order to catch the specific individual ability to offset adverse impacts of exogenous shocks.

Surprisingly or not, in the case of Transnistria, indicators of the index tend to be highly politicized and subject to propaganda[24], except perhaps for the first component of the index (macroeconomic stability), which may be less exposed to speculations. The lack of comprehensive and reliable statistics does not allow calculation of the Resilience index for Transnistria, developed by Briguglio et al (2006). Therefore, a relevant qualitative method to assess the components of Transnistria's resilience is to be elaborated. To comply with the theoretical framework suggested by Briguglio et al (2006) and chosen for the study, components of the Economic Resilience index will be still utilized as parameters of Transnistria's economic resilience.

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[24] The statistical data to be used for the calculation of the EVI index should also be approached carefully. However, in view of the structural nature of statistics used to estimate the EVI, it allows for comparatively less data rigging, and therefore, may contribute to a higher validity.

In view of the research question's complexity, *semi-structured expert interviews*[25] would be most relevant for the study. If the *interview guide*[26] is designed to correspond to the parameters of resilience, the answers constitute a most precise assessment of the research question. Whereby, open questions in the interviews may be utilized to define possible specific niches, constituting *individual* sources of resilience of the Transnistrian economy.

Interviewing is used to assess these parameters of resilience: (2) micro-economic market efficiency; (3) good political governance; (4) social development; and (5) specific individual sources. Macroeconomic stability (1) may still be estimated according to indicators suggested by Briguglio et al (2006). Assessment of Transnistrian economic resilience will be structured in the following way:

Table 3.2.2 Resilience Assessment Scheme

Component of Resilience	Quantitative Variable
Macro-economic stability (1)	Fiscal deficit to GDP ratio
	The inflation and unemployment rates
	Relation of the external debt to GDP
Component of Resilience	**Topic for the Interview Questions**
Microeconomic market efficiency (2)	The size of government
	Freedom to trade
Good governance (3)	Impartiality of courts
	Protection of intellectual property rights
	Military interference in the rule of law
	Political system and integrity of the legal system
Social Development (4)	Education (adult literacy rate, school enrollment)
	Health (life expectancy; quality of medical facilities, housing)
Component of Resilience	**Topic for the Interview Questions**
Specific individual sources of resilience (5)	Specific economic niches (open questions)
	Other individual factors of resilience (open questions)

Taking into consideration sensitivity of the research question[27], and the fact that the topic is little explored, priority will be given to the general judgments of the

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[25] Semi-structured interview is characterized by a sequence of themes to be covered and suggested questions, whereas at the same time it is open for changes of sequence and forms of questions to follow up the answers given. It implies a targeted approach to interviewees (Kvale 1996:124).

[26] A list of questions or fairly specific topics to be covered in the interview (Bryman 2004:321).

[27] Both economic viability of Transnistria and state-building in the break-away region as such is an issue fiercely disputed by the conflicting parties and mediators in the settlement negotiations.

experts, instead of pressing for answers to all of the questions. To reveal resilience dynamics over the period of 2001-2010, the interviewees will be asked to assess economic developments observed in the region and name the main sources of resilience in a flexible dialogue.

It is important that experts are chosen with a special diligence to ensure validity of the results. Thus, the experts will have to represent all the conflicting parties, main mediators (Moldova, Transnistria, Russia, Ukraine, OSCE) as well as observing parties (EU, US). The number of interviewees will be limited to maximum two from each party to simplify analysis of the results.

3.3 Estimation of Economic Viability

As suggested earlier, the economic viability of Transnistria will be assessed by juxtaposition of its structural economic vulnerability and economic resilience. This method, elaborated by Briguglio et al (2008) implies locating the country in one of the four quadrants on a coordinate system with two axes standing for vulnerability and resilience. The four quadrants represent different scenarios of economic development:
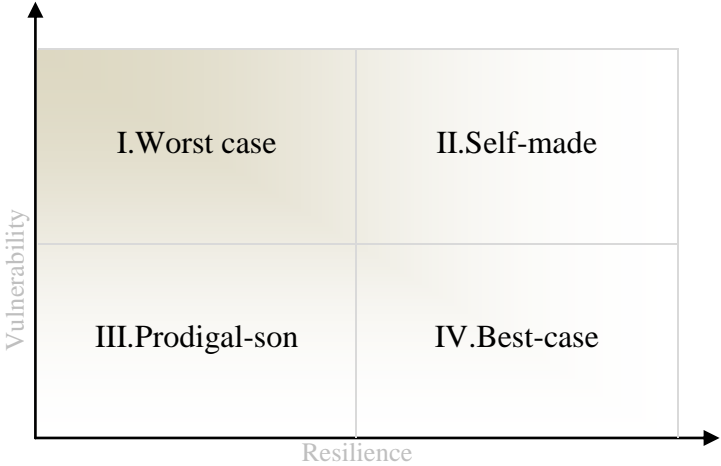
Figure 3.3 Juxtaposition of Vulnerability and Resilience

Source: Briguglio et al 2008

The thesis will employ the provisory EVI threshold of 40 (Briguglio et al 2008) to grade de facto economy into the relevant quadrants by vulnerability. While its gradation by resilience will be estimated through a qualitative analysis ("comparatively high"/"comparatively low") of the interviews' results. For the

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research, the four scenarios of the economy's development ("worst-case", "self-made", "prodigal-son" and "best case") will be assumed to correspond the four estimates of the economic viability: "non-viable", "viable by effort", "viable by luck" and "viable".

Thus, quantitative and qualitative methods are combined in the thesis to assess Transnistrian economic viability[28] as a cumulative function of vulnerability and resilience. As discussed earlier, attributing vulnerability to exogenous factors beyond the state's control allows accounting also for the impact of vulnerabilities induced by *secession* and *de facto status* upon economic growth. While the policy-induced features of resilience reveal the ability of Transnistria to adjust to living in the non-recognition.

The final variable to be revisited here is *dependence* on the patron country. Dependence brings a number of dividends: funds to cover budget deficit, guaranteed supply of strategic goods, and stable market for exports. This increases resilience of the economy and strengthens economic viability. On the other hand, such advantages make the economy less competitive and deteriorate de facto state's ability to independently withstand exogenous adversities (*exogenous shocks*). In addition, a sudden loss of the patron state's support would push de facto economy into a major crisis (hence, dependence increases *exposure to shocks*). So, dependence on a patron state expands not only resilience of de facto economy, but also its vulnerability, although it is not accounted for in the EVI. This should be taken in consideration, so that the results obtained in the study do not bring to misleading conclusions.

The methodology elaborated in the thesis facilitates application of tools, developed for analysis of SIDS economies, to the research of de facto state's economic viability. It combines qualitative and quantitative approaches to accommodate the findings of major theories of small island developing economies.

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[28] According to Bryman (2004:457), a multi-strategy research is justified when researchers cannot rely either on a qualitative or quantitative method alone. Although the use of both quantitative and qualitative methods is criticized for the attempt to combine two separate paradigms, the approach chosen for the thesis may be justified by the need to reveal the "hidden" dimensions of de facto state's viability.

4 Economic Viability of "The Island of Transnistria"

4.1 Calculation of the EVI Components for Transnistria

Calculation of the retrospective EVI for the PMR was constrained by the availability of time series data. Taking advantage of the statistical yearbooks issued by the State Statistics Service of the Ministry of Economy of the PMR (2006, 2011), the period of 2001-2010 (ten years) was chosen for the research. Having applied formulas (1) – (7) given in Section 3.1.3 to compute the components of the EVI, the following scores were obtained (for detailed results of the calculations see Appendix 2):

Table 4.1 Retrospective EVI: Transnistria, by Components, 2001-2010

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EVI	**47,63**	**48,24**	**48,23**	**48,81**	**48,30**	**48,33**	**48,03**	**48,53**	**48,22**	**48,77**
EXPOSURE INDEX	45,07	46,29	46,27	47,44	46,41	46,46	45,88	46,88	46,25	47,36
Population (Smallness)	86,76	86,77	86,79	86,90	86,92	86,93	86,94	86,95	86,96	86,97
Remoteness (Location Index)	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25
Structural Index	30,92	35,63	41,13	60,84	60,26	61,09	55,48	54,81	30,26	25,58
-Agricultural Production share in GDP	0,17	5,00	4,83	9,17	5,00	5,17	2,83	6,83	4,50	9,00
-Merchandise export consentration	30,75	30,63	36,30	51,68	55,26	55,92	52,65	47,98	25,76	16,58
SHOCK INDEX	50,19	50,19	50,19	50,19	50,19	50,19	50,19	50,19	50,19	50,19
Natural Shock Index	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00
-Homelessness	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
-Instability of Agricultural production	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Trade Shock Index	50,38	50,38	50,38	50,38	50,38	50,38	50,38	50,38	50,38	50,38

Dynamics of the EVI scores over the ten year period reflected major trends in Transnistrian economic development, justifying the use of the methodology. Although, to tailor it to Transnistrian specifics, additional adjustments were necessary. Also interpretations of the scores obtained for the EVI components reach beyond the SIDS theory, and should be highlighted accordingly.

(1) Smallness: Transnistrian population statistics has been relatively stable over the period. Consequently, dynamics of the indicator revealed practically unchanged (and high) impact of Smallness upon the break-away region's vulnerability. Indeed, the PMR suffers substantially from inefficiencies stemming from Smallness: inability to benefit from *economies of scale* (imported goods drive domestic products out of the market), *over-monopolization* of the economy (with the "Sheriff" company accounting for 16% of the GDP income and owning a wide range of companies from KVINT brandy factory, bakeries, mobile phone operator, retail stores, to a football club (Isachenko 2009)), high *openness of the economy* leading to higher vulnerability to price fluctuations and adverse impact of the foreign trade policies (trade blockades periodically initiated by Ukraine and Moldova), limited *human capital* reflecting the poor efficiency of domestic bureaucracy and poor government (Protsyk 2009), underdeveloped *social infrastructure* (the only university in the region does not accommodate all the students willing to get higher education, for most advanced surgeries Transnistrians travel to Moldova or other neighboring countries (Luskanova 2012 [Telephone interview])).

The available population statistics does not, however, reflect actual emigration trends. Hidden migration, by some estimates, amounts to almost 30% of the working population in the period of 2001-2010 (Spanu 2012 [Personal correspondence]). If taken into account, these data would push the Smallness component by 1,5, increasing the region's exposure to adverse exogenous factors.

(2) Remoteness: The component was calculated on the basis of WTO trade statistics. In the absence of the official data on distances from Transnistria to the capitals of main exporter's, the distances from leading world exporters to the "parent capital" Chisinau were utilized. In view of the 85km driving distance between the two capitals, the data are believed not to interfere significantly with the results. Distance data are provided by the French Research Centre in International Economics (Mayer and Zignago 2011). For simplicity, only 10 top exporters were considered for calculation of the minimal average distance from Transnistria to the world markets.

Remoteness scores for Transnistria have proven to be strikingly low. Indeed, the break-away region enjoys an advantageous geographic position, situated not far

from the top world's exporters Germany, Italy and the UK. On the other hand, the methodology of calculations lacks relevance in the case of Transnistria, as it doesn't explain the geographic pattern of Transnistria's trade. The largest bulk of foreign trade (61%) is exercised with Russia, Moldova and Ukraine, and this share has been growing primarily as a result of limited access to other foreign markets.

In addition, Remoteness is proxied to measure not only real transportation costs that influence trade flows, but indirectly also other related costs or barriers facilitating or decreasing export and import operations. In this regard, Transnistria carries the burdens of increased costs both due to its landlocked location, and because of its de facto status and the frozen conflict setting. Thus, for example, according to Moldovan and Ukrainian agreements of 2006, all exporting and importing companies of the unrecognized republic are bound to exercise customs procedures in Moldova (ICG 2006). According to Gorelova and Selari (2009:34), these regulations within a year raised costs by at least 50% and lowered profitability of local businesses, as they inflicted additional operational costs, unscheduled shipment delays and often also other administrative obstacles. The economic sanctions were labeled as leading to "humanitarian catastrophe" in the region (NKR MFA 2006). In the calculations conducted the 15% landlockedness adjustment was kept for simplicity reasons. The additional costs are indeed much higher. According to Gorelova and Shelari (2009:34) the "double registration" increased the customs costs by 50%, which means a proportional "increase" of Transnistrian distance to the world's markets. The so called "railway war" of 2006, when Moldova stopped railway deliveries from Transnistria, inflicted a total stop of imports and almost a 57% decrease of exports earlier shipped by railway, the cheapest means of transport in the landlocked break-away region.

(3) Merchandise export concentration: The statistics available for Transnistria's exports allowed assessment of the product groups at one-digit level of the SITC only. This, on the one hand, may have slightly distorted the results, but on the other, could be more relevant for the small economy with comparatively lower variety of goods produced by one industry sector.

The scores obtained for 2001-2010 proved to grow up until 2007, and subsiding after the peak of almost 60% concentration to nearly 17% by the end of the

period. This, however, was not an evidence to positive structural changes in trade pattern, but rather reflected the dramatic decline of total exports, and metallurgic production in particular, in the aftermath of the global financial crisis of 2008.

The considerable volatility of the indicator points also to instability of the production output. Also here, de facto status and frozen conflict exert their harmful impact. For example, in 2011 the largest enterprise in Transnistria and Moldova, the fifth largest mini-steel factory in Europe, the Moldovan Steel Works plant in Rybnitsa MMZ suffered almost a 10 month standstill resulting allegedly from a customs dispute with Moldova (Allin 2011:4).

The concentration of Transnistrian exports is perhaps better grasped in the study of corporate monopolistic trends rather than in the export specialization. According to International Crisis Group research (2006:4), the MMZ accounted for over 60% of exports in 2006. Also textile factory Tirotex and monopolistic company Sheriff play their key role in export concentration. The harming impact of the present export specialization upon the region's vulnerability was only partly revealed in the indicator of the Merchandise export concentration score.

(4) Share of agriculture, forestry and fisheries in GDP: As Transnistrian output of the fishery and forestry production is too insignificant, this component of the EVI for Transnistria was proxied by the agricultural output share in GDP only.

This component of the EVI also proved to be volatile but insignificant. Apart from fluctuating weather conditions, the floating share of agricultural output is partly caused by the high openness of the economy and lack of the due state protection of the sensitive and under-reformed sector from competitive imports. It should also be mentioned here, that smuggling in food products is, according to the EUBAM, one of the most common violation of the border regime between Transnistria and Moldova, Ukraine (de Blasio 2012 [Personal correspondence]).

Over the 20 years since secession Transnistrian agricultural products have been ousted from the market by imported goods. By FAO classification, Moldova (including Transnistria) is represented in the group of high risk possessing very low food security. According to Prime Minister of the PMR Stepanov, Transnistria satisfies only 10-30% of its demand for meat, dairy products, fruits and vegetables

(Government of the PMR 2012, January 31). On the other hand, the remarkably low share of agriculture in Transnistrian GDP does not allow the volatilities of the sector spill over the structural economic vulnerability of the region.

The growing trend of the indicator scores may have grasped the recent priority laid upon this sector of economy by the government. After this largely industrial region of Moldova seceded from the rest of the country abundant in agricultural products (in 2009 the share of agricultural products in Moldovan exports was 54% (Gorelova 2009:87)), finally attempts are made to develop the sector to balance out the production pattern (Luskanova 2012 [Telephone interview]).

The scores, increasing from 2008 on, may have also caught the foreign (Russian) aid that has been channeled into this sector of economy since 2008. According to Head of the Parliament of the PMR A.Kaminsky, by virtue of Russian-financed loan mechanisms nearly 80% of Transnistrian agricultural machinery has been modernized (Kaminsky 2011, July 12), increasing productivity of local farming.

(5) Homelessness due to natural disasters: So far, no major natural disasters have been registered in Transnistria, since the geographic position of the region does not imply tsunamis, volcanoes or extensive floods. This makes this EVI component not suitable to measure the region's proneness to shocks. If natural disasters represent all the shocks that are beyond the state's control inflicting harm primarily to the human capital, Homelessness component could be proxied by the shocks induced by the *frozen conflict* (the number of homeless, refugees or number of victims could stand conflict induced shocks). Such an indicator measuring propensity to shocks due to the ongoing frozen conflict as a structural handicap would be relevant also for other secessionist regions not prone to natural disasters.

Transnistrian secession from the parent state was relatively mild, and despite the frozen conflict conditions, the PMR has not lost a single life in a violent conflict since 1992, when 300-500 people were killed, and around 100 thousand refugees fled to adjacent countries (Helsinki Watch 1993:4-5). If the numbers were included in the EVI, the results would be distorted by documenting the intense conflict proneness of the region. This would contradict with the PMR's peaceful existence over 20 years

now. It was, therefore, assumed that this component equaled *zero* – standing for low probability of shocks costing human lives or inflicting refugees[29].

(6) *Instability of agricultural production:* The short period of 10 years does not allow tracing volatility of this indicator, which was therefore assumed to be stable over time. Since raw scores of the component turned out to be higher than Max value introduced by the UN (34,6 while the upper boundary is 20), the normalized indicator was assumed to equal 100.

The remarkable instability of agricultural output revealed crisis developments in the sector. Agriculture creates little (sometimes even negative) value in Transnistrian GDP (Shelari 2009:4). In the period of 2003-2008, share of agriculture in the total economic growth constituted -5,4% (Statistical Yearbooks 2006, 2011).

(7) *Instability of exports of goods and services* proxies the trade shock index for Transnistria. For the same reasons as for (6) it was assumed to be stable over time.

The high score of the trade shock index reflected both instability of domestic supply and the region's exposure to the foreign economic pressure. For example, Gorelova (2009:85) listed at least five major conflicts between Moldova and Transnistria implying income loss for both (including several "railroad wars", blockade of railroad shipments introduced in 2006 and partly lifted in 2012, obligatory Moldova-registration for Transnistrian exporting and importing companies, special customs regime introduced by Moldova).

For obvious reasons, not all the damage caused by external trade shocks can be measured. Thus, for example, anti-smuggling measures are not directly reflected in the vulnerability score. While establishment of the EU Border Assistance Mission to Ukraine and Moldova in 2005, aimed to curb cross border smuggling at the Ukrainian/Transnistrian border, constituted a major shock to the region's "survival economy". Only in 2011 the Mission secured seizures of contraband goods – including cigarettes, alcohol and vehicles – valued at EUR 3,2 million (de Blasio 2012 [Personal Correspondence]). Forcing the shadow economy into the "white" is a major challenge

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[29] However, the zero score does not reflect the fears expressed by some researchers (for example, Popescu 2006b) regarding the hidden propensity of frozen conflicts to escalate. Further studies should be entertained to adjust the Homelessness component to the frozen conflict specifics.

for Transnistria's de facto state, and anti-smuggling measures imply higher *short-term* vulnerability of trade flows. This source of vulnerability, not reflected in the EVI score, is too considerable to be neglected. In *the long run*, however, diminishing shadow economic activities inflicts positive structural changes, decreasing structural economic vulnerability of the region.

4.2 The EVI Scores: Behind the Vulnerability Façade.

The EVI scores obtained in the study reveal growing dynamics of Transnistria's vulnerability profile. Both *proneness to shocks* and *exposure* to adverse exogenous factors (extent of damage inflicted by the shocks) are high and steadily *increasing* since secession. If compared with other countries (See Appendix 3), the region's exposure indicator is close to Haiti, Maldives, Papua New Guinea, Zimbabwe and even Somalia. Whereby, instability of exports influences the scores most. In addition, Transnistria's average EVI score for 2001-2010 is 48,3, which is over the graduation threshold of 40,0, suggested by Briguglio. Consequently, the region's structural vulnerability is highly *unfavorable for economic growth*. This is even excluding the vulnerability not grasped by the EVI and partly elaborated on in the previous Section. The detrimental effect of high vulnerability *lowers the viability* of the region leaving few chances for its survival as a de facto state.

If averages of the retrospective EVI indexes are estimated for different categories of countries (data computed by Cariolle (2011b) were used), Transnistria's EVI scores reveal its structural similarity with the small island developing states, supporting the logic of assumptions made in the thesis:

Table 4.2 Averages of Retrospective EVI by Country Groups, 2001-2008

	Shock Index	Exposure Index	EVI
SIDS	37,52	64,30	**50,93**
Landlocked countries	38,60	50,61	44,61
Non SIDS	36,18	40,83	38,50
Non Landlocked countries	35,81	44,97	40,36

The average EVI calculated for Transnistria for 2001-2010 approaches the average score of SIDS during the same period of time, floating between the indicators

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of landlocked and island states, which demonstrate the highest structural vulnerabilities in the world. Indeed, Transnistria bears the burdens common to *small economies* and *landlocked countries*.

Interesting conclusions arise if the individual EVI components calculated for Transnistria are compared with the EVI scores of some SIDS (see Appendix 3, Table A.3.2). Close to other small island states by *population* (in 2006, the average SIDS score being 80,93), Transnistria retains a clear advantage of proximity to the world markets (PMR's 6,25 for *Remoteness* by contrast with the SIDS average of 71,52), however, constrained by the frozen conflict setting. Most concerns raise the PMR's *Instability of exports* (well above the SIDS average) and *Structural Index* (in 2006 being almost twice higher than SIDS average). By *Structural index*, the break-away region is similar to Tuvalu where major government revenues come from sale of stamps and coins and worker remittances, or to Solomon Islands surviving by subsistence farming and fishing it development being constrained by violent ethnic tensions. Transnistrian *instability of agricultural production* in 2006 documented similarity with Cape Verde, an island in the Atlantic Ocean experiencing long periods of droughts and by 82% dependent on imported foodstuffs. Transnistrian *Instability of exports* is above average, while by *Export concentration* in 2006 the region was closest to Samoa, where agriculture furnishes 90% of exports. All the small islands used for comparisons are Least Developed Countries heavily dependent on foreign aid (facts on small island states were borrowed from the UN-OHRLLS Country Profiles).

In addition to *smallness* and *landlockedness*, international pressure and isolation of *de facto state in a frozen conflict* inflict higher and more unpredictable fluctuations of trade volumes.

Although the EVI is not designed to measure *external economic dependence* as a separate indicator of structural vulnerability, it is implicitly eminent in the EVI components calculated for Transnistria. Foreign ownership on major income-generating companies, Russian subsidies for development of agriculture, external trade blockades or specific trade barriers are the factors that increase the region's exposure to adverse exogenous shocks, to mention a few.

Another significant factor standing behind a number of vulnerability sources is the *post secession legacy* described earlier. High industrialization and narrow export specialization stem from secession from the parent state. Whereas, before the secession Transnistria was not only part of Moldovan economic system, it was part of the (communist) system that collapsed. So, after secession the region faced a twofold task: *substitution* for the loss of access to the parent state's economy and *transition* to market economy. As justly noted by Blakkisrud and Kolstø (2011:188), "*nowhere have the challenges been greater than in Transnistria, which not only was the sole post-Soviet de facto state that did not inherit a set of statelike structures for ethno-territorial autonomy, but also differed in being highly industrialized and having an export-oriented economy*".

Summarizing the findings of the thesis, sources of Transnistria's structural economic vulnerability could be grouped into five main *handicaps* of the region:

- Smallness
- Landlockedness
- "Islandness" (de facto status and frozen conflict setting)
- Post-secession legacy
- Dependence

These handicaps constitute the core obstacles to economic viability of the region as a de facto state in the long run, unless addressed accordingly. It should also be noted, that unlike the smallness and landlockedness, de facto status, frozen conflict setting and dependence are *reversible*.

For Transnistria to be viable a twofold solution may be considered:

- *Political solution*: when adverse effects of smallness, landlockedness, de facto status (and frozen conflict setting) and dependence are mitigated. This implies either final settlement of the frozen conflict, or a "*semi-solution*" reached through international negotiations and allowing a limited economic development for the region. The trade-off between the two solutions attracts much attention across the existing de facto states, but is unfortunately a question for a separate study.

-       "*The Singapore Paradox*"-solution: when high vulnerability is offset by a higher resilience, generated through sound state policies. The dynamics of Transnistria's resilience over the same period of 2001-2010 is addressed further.

4.3 Transnistria's Resilience Profile

As suggested in the Section 3.2, to assess Transnistria's resilience, expert interviews were conducted. During March – May 2012 experts were asked to answer the questions by e-mail or by phone, listing the region's resilience sources according to their importance. The interviewees were chosen to represent all the parties of the "5+2" settlement negotiations, including Moldova, Transnistria, Ukraine, Russia, OSCE and two observers – the EU and the USA. Whereas, major centers of expertise (EUBAM Mission to Ukraine and Moldova, OSCE Mission to Moldova, some national Ministries of Foreign Affairs and universities) were contacted to secure an in-depth look into Transnistrian viability (for the full list of experts see Appendix 5). To provide for validity of the results, equal number of experts from each of the parties was interviewed. Due to time constraints, only one representative of the OSCE was included in the research. However, since additional interview would also reflect the OSCE official position, this is believed not to interfere significantly with the results.

The resilience parameters presented in Table 3.2.2 were used as an interview guide. Whereby, open questions proved to be instrumental, as the specifics of Transnistrian economy required a more flexible approach. Analysis of the interviews was performed by employing *meaning condensation*[30] to single out the main sources of resilience.

The overall resilience estimation varied among the parties. While Russian experts claimed that the break-away region possesses *substantial resilience* and is *viable* (although experiencing problems typical for highly industrialized post-Soviet territories), and Transnistrians were cautious but optimistic in conclusions, other experts deemed the economy *definitely non-viable but growing resilient* due to

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[30] According to Kvale (1996:191-192), meaning condensation entails reduction of large interview texts into briefer, more succinct formulations.

Russian subsidies. Surprisingly, the assessment of the main sources of resilience demonstrated an overwhelming unanimity. The answers were cumulated into four groups of major sources of Transnistria's economic resilience (listed by importance):

- *(1) financial support from Russia*
- *(2) heavy industry as a source for exports and budget revenues*
- *(3) shadow economy (money laundering and smuggling of goods)*
- *(4) remittances*

The answers proved to list the *specific individual sources of resilience* only, evidencing a higher *individual "actor-ness"* of de facto states in comparison with sovereign small islands, when activity in specific economic niches prevails over traditional economy. On the other hand, the estimated resilience profile revealed the high level of adjustment to living in the non-recognition and frozen conflict in the form of *survival economy*. Whereas *good governance, social development, microeconomic market efficiency* – characteristic features of a well-functioning economy – were not mentioned among the factors playing a role in Transnistrian economic development.

Indeed, Russian *financial support* since 2007 amounts to almost 50 mln USD annually (Lyndon 2011:2), and has increased lately with 30 mln USD aimed to stabilize Transnistrian ruble. The financial flows are channeled to pay additional 15 USD to 137 thousand of Transnistrian pensioners monthly, as well as to cover the budget deficit (BaltInfo April 3, 2012). A hidden but substantial support is rendered as "silent acceptance" of the non-payments for gas to Russian Gazprom.

Heavy industry brings budget revenues in form of taxes and dues. Whereas, 60% of the budget income comes from a few largest companies: the Moldovan Metallurgical Plant MMZ in Rybnitsa, the Power Plant MGRES in Kuchurgan, as well as from the monopolistic company Sheriff (Spanu 2012 [Personal correspondence]). The trend of overconcentration of industrial production, on the other hand, undermines resilience adding up to structural economic vulnerability of the region.

The companies mentioned above trade to Russia, Ukraine, Germany, USA and other countries, competing with sovereign states on equal terms. The high competitiveness of Transnistrian heavy industry is ascribed to the cheap (free) natural

gas. If the share of natural gas in a unit price of metallurgic production is around 40% (Novytsky 2008), Russian demand to pay for the fuel would lead to at least a 40% increase in prices for MMZ production, causing total loss of foreign markets. This reveals another dimension of dependence on Russia.

Shadow economy has decreased lately thanks to the EU Border Assistance Mission to Ukraine and Moldova some coordinated actions of Moldova-Ukraine customs. Detections of smuggling and customs fraud contribute to the elimination of the shadow schemes. Yet, it is still an income-generating activity for many of Transnistrian businesses, and according to Gorelova and Selari (2009:3), annual volume of shadow operations amounts to 1 bln USD (roughly 1/3 of the region's GDP in 2011). Interestingly enough, Russian experts interviewed noted that assessments of the scale of the shadow economy are generally overdriven, while Transnistrian population mostly survives by subsistence farming.

The role of *remittances* in the economy of Transnistria is barely studied. A research of 2007 shows that the total amount of remittances amounted for 132 mln USD (almost 15% of GDP). Most of the remittances were received from Russia (80%), Turkey (10%), Italy (8%), USA and Cyprus (PRB 2007). Whereas, taking into consideration the poor banking system in the region, a substantial amount is transferred bypassing banks. According to the same study, average amounts transferred range between 200 and 700 USD, which means that remittances are mainly sources of survival rather than investments for the reformation and structural changes in the economy.

According to Statistical Yearbooks of 2006 and 2011, in 2010 the number of of people employed in the economy was by 87.000 people less than in 2001, which is almost one third of the total labor force in 2001. This not only reveals the possible scale of total remittances, but also shows decrease in human capital – a component of structural economic vulnerability.

A separate topic not covered in the expert interviews research is the *macroeconomic stability*. Facts show a disastrous macroeconomic situation in the region. In 2012 Transnistrian *fiscal deficit* amounted to 67% (Ministry of Finance of the PMR 2012), which is traditionally covered by foreign aid provided by Russia.

According to Shelari (2010:2), the average *inflation rate* for 2003-2008 was 24,6%, *unemployment rates* floated around 16%. As documented by newly elected President of the PMR E.Shevchuk, the total external debt of the country (non-payments for the Russian gas) reached in 2012 the level of 3bln USD (Shevchuk 2012), thus driving the *relation of the external debt to GDP* to almost 300%.

As comes from the research, resilience of Transnistrian economy is *comparatively low*. Analysis of the interviews conducted shows that resilience-building factors are almost all *increasing structural vulnerability* as well. Thus, for example, Russian financial support is volatile, and cannot be relied on. Shadow economy provides no budget revenues, and therefore has no positive impact on the economic structure, distorting market information and leading to inefficiencies. Remittances cannot substitute the indispensible strategic investments and do not contribute to restructuring and reformation of the economy either. Heavy industry and legal foreign trade appear to constitute the only resilience-building components generating structural strength and decreasing vulnerability. The high concentration of industrial production, though, blurs its positive impact upon the region's economic viability.

In addition, a bulk of resilience is generated by the *frozen conflict setting* and *de facto status*. It is mainly the income from shadow economy and smuggling, but also *foreign financial support* partly stems from the same setting. Obviously, since the frozen conflict and non-recognition are among the region's major handicaps preventing economic development, this "source of resilience" also *increases vulnerability*.

Finally, *economic dependence* on Russia protrudes as major factor behind the main resilience sources. Foreign aid in the form of financial flows and loans, support of Transnistrian currency, macroeconomic stabilization, investments in the biggest companies MMZ and MGRES, as well as some social security guarantees are just a few examples of such dependence. Despite the resilience-building targets, it increases the break-away region's exposure to adverse exogenous factors.

4.4 Economic Viability of Transnistria

To assess the economic viability of Transnistria, the research findings were used to locate the economy on Briguglio's map, juxtaposing its vulnerability and resilience[31].

Structural economic vulnerability scores revealed a very *high* (and *growing*) viability of the break-away region. The high EVI scores imply poor structural conditions for the economy to grow. Countries with high vulnerability are not necessarily "*failed states*"[32], though. The "Singapore Paradox" described by Briguglio et al (2008) envisages the possibility of a spectacular economic development *despite* high vulnerability by sound *resilience-building* efforts.

At the same time, assessments of the region's economic resilience potential were dubious: on the one hand, the resilience was estimated as very *low*, and on the other, as *growing* enough to exist (by virtue of external support). Depending on the resilience assessment, Transnistria's economy can be located either in quadrant I. ("non-viable") or in quadrant II. ("viable by effort"):
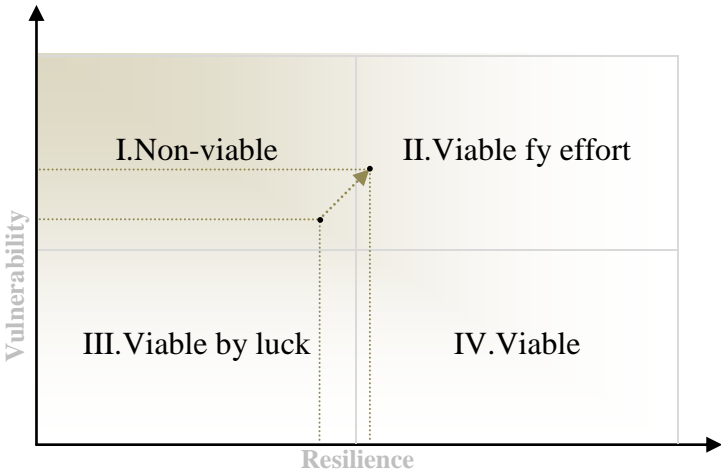
Figure 4.4 Juxtaposition of Economic Vulnerability and Resilience of Transnistria, 2001-2010

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[31] Assumptions regarding applicability of the map to define economic viability require additional theorization reaching beyond the scope of the thesis.

[32] Used in the definition preferred by the Crisis States Research Network in London (2006) defining a "failed state" as a condition of total "state collapse", when a state can no longer perform its basic security and development functions, and can no longer reproduce conditions for its own existence. The definition implies clear difference between "poorly performing" states and "failed states".

Location of the region's economy on quadrant I. or quadrant II. depends on the scope of efforts taken to support its existence, that is, by the scope of *external economic support (dependence), heavy industry, shadow economy and remittances*. As may be concluded from the research, the resilience-building registered in Transnistria *increases* the region's economic vulnerability: foreign aid is channeled to cover social payments or budget expenditures, rather than structural reforms, adding little if some value to the recipient economy; adverse impact of shadow economy is well documented, while remittances offer no solution to the lack jobs at home.

The high economic dependence, as estimated in the course of the expert interviews, is the main source of resilience and at the same time the largest handicap. Indeed, Bertram's (2004) findings outlined in Chapter 2 show that small island states converge with patron economies rather than with each other, not only gaining economic benefits in return for dependence but also *increasing their vulnerability*. Whereas convergence is explained as a conscious choice of the dependent territory seeking a stable economic growth and higher living standards for the people. Transnistria's economic (and political) dependence on Russia is a clear example of "metropolis-periphery" relations, inflicting adverse structural changes to the dependent economy. Thus, if dividends stemming from economic dependence for some reasons fail, Transnistrian economy will be *on the brink of collapse*.

On the contrary, if the "Singapore paradox" is revisited, there is an alternative way to address "islandness": through building resilience and reducing vulnerability at the same time. Now one of the largest exporters in the world, the small island of Singapore has started its history of astonishing economic development with political decisions on development of exporting industries, strengthening of human capital and search for own niches on the world markets. These measures led to total restructuring of the economy, and hence, to its lower exposure to adverse exogenous shocks. According to a WTO report on the economic environment in Singapore, it has managed to build a very strong resilience: "*although its high degree of openness leaves Singapore vulnerable to periodic external shocks, the economy's flexibility has enabled it to adjust rapidly to these shocks by constantly improving productivity, and thus international competitiveness, which in turn contributes to economic growth and*

higher living standards" (WTO 2008:1). At the same time, the island state took measures to "*mitigate its vulnerability to external shocks*" by "*diversification across markets and sectors*" (WTO 2008:16).

In view of the catastrophic state of Transnistrian economy and its unrecognized status, the region has limited capacity to mitigate its structural vulnerability stemming from smallness, landlockedness, post-secession legacy and dependence. But rather than taking resilience-building measures that bring short-time effects and deteriorate economic vulnerability, state policies to restructure industrial pattern, introduce market reforms and attract foreign investments could be prioritized. The research allows concluding, that over the recent ten years the eternal dilemma of choice between immediate needs (*survival*) and economic development in the long run (*viability*) has been approached from a short-term perspective. The break-away region has built up a minimal resilience at the level of survival to retain a *subsistence economy*, at the cost of both vulnerability and viability in the long-term.

Implications of the poor viability potential promise few chances for a prosperous future and may weaken Transnistria's position in the settlement negotiations.

Conclusions

Before drawing final conclusions, it should be reiterated that the aim of the research was twofold.

Firstly, it attempted to explore Transnistrian economic viability. In view of the modest scientific research on the topic and its high politicization, the study was meant to fill in the knowledge gaps and present a well-grounded assessment of viability. By assuming that de facto states bear main features of small island developing states, the dynamics of economic viability under frozen conflict was traced over the period of 2001-2010 to assess region's economy and predict the future development scenario. Whereas, efforts to build a well-functioning economy were set in a wider state-building context – as a product of living in the non-recognition, the strive for international recognition and final settlement of the frozen conflict.

Secondly, the study intended to elaborate a methodology to be applied to similar researches on other de facto states.

Compensating for the lack of methodology, the theories explaining economic development of small island developing states were utilized in the thesis. Briguglio's dichotomy of vulnerability and resilience was employed as a framework to integrate several theoretical and methodological findings: the UN's Economic Vulnerability Index assessing structural economic vulnerability, theories exploring resilience of SIDS economies – MIRAB, PROFIT and SITE, as well as Bertram's conclusion on the convergence of small island states with their metropolitan economies. Unlike the structural economic vulnerability assessed *quantitatively*, economic resilience of the separatist republic was estimated *qualitatively* by conducting semi-structured expert interviews.

The results of the research revealed comparatively *high structural economic vulnerability* of Transnistria with the EVI *growing* from 47,63 to 48,77 in the period of 2001-2010. While the experts' judgments on the economic resilience of the region were dubious: ranging from *low* to *growing enough to exist* by virtue of mainly external support.

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Juxtaposition of the vulnerability scores and resilience assessments show the low potential of economic viability in the Transnistrian economy. As comes from the research, the economy is generally *non-viable* but *made subsistent by efforts* of its patron state – Russian Federation, as well as by virtue of income from heavy industry, exports, remittances and shadow economy. Extrapolation of the current trend promises little hope for prosperous economic future for the separatist "island".

Transnistria's capability of surviving as a relatively independent social and economic unit and developing into a well-functioning economy depends on the *resilience-building* measures to be launched by the state leadership. By contrast with the present resilience profile, priority should be given to the reforms strengthening flexibility of the economy and mitigating its vulnerability. So far, efforts taken within Transnistrian state-building project to build a strong economy were mismanaged to *undermine its vulnerability*.

Implications of the empirical findings envisage further weakening of the region's position in settlement negotiations, or also little chances for international recognition. However, to be validated, these statements require a separate research.

The *methodology* elaborated in the course of the thesis as well as the "island" assumptions have proven to be generally instrumental. While the structural economic vulnerability concept corresponded with de facto state's conditions, the Briguglio's concept of resilience should be additionally modified to be applied in the situation of non-recognition. Although the UN methodology of calculating the EVI appeared to be well-adjusted for the assessment of de facto economy, further refinements are to be introduced to better grasp the specifics of break-away regions under frozen conflict. Application of expert interviews to estimate economic resilience proved to be highly instrumental to balance the quantitative results with qualitative assessments and thus, reach a higher validity of the general conclusions.

It should be noted, however, that the research was constrained by a number of *limitations*. It is therefore important to keep in mind that small island economies and de facto states are still different and challenges they face are of different origin and causality, which is only partly revealed in the thesis. In addition, comparing economic performance of a de facto state with achievements of a sovereign country is not fully

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justified. Furthermore, the methodology used in the thesis was assumed to be applicable in the "island situation" only and should be revised if a political solution on the frozen conflict is reached. Finally, conclusions drawn here are based on the research findings constrained by the available statistics. The results of the calculations depended to a certain extent on the quality of the data provided.

To crown all, the research did not account for the complex geopolitical, security and other dimensions of de facto existence under frozen conflict, limiting the focus to the economic performance only. A more integrated study is necessary to give a thorough assessment of the past developments, explain the present trends and predict the future of the "Island of Transnistria".

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Appendixes

Appendix 1. Lower and Upper Boundaries of the EVI components

Table A.1.1 Max and Min Values for Normalization of the EVI Components

EVI Component	Max value	Min value
Population (millions)	100,000	0,150
Remoteness (index)	0,900	0,100
Merchandise export concentration (index)	0,950	0,100
Share of agriculture, forestry and fisheries in GDP (%)	60,000	0,000
Homelessness due to natural disasters (%)	0,002	20,340
Instability of agricultural production (index)	20,000	1,500
Instability of exports of goods and services (index)	35,000	3,000

Source: UNDESA 2008 (42)

Appendix 2. Components of the Rectrospective EVI Computed for Transnistria, 2001-2010

Table A.2.1 Remoteness, 2001-2010

2001	Distance	% of the world exports	Trade weighted distance	2002	Distance	% of the world exports	Trade weighted distance	2003	Distance	% of the world exports	Trade weighted distance
US	7650,435	11,78	900,974	US	7650,435	10,68	816,781	Germany	1656,77	9,91	164,140
Germany	1656,772	9,23	152,978	Germany	1656,772	9,49	157,161	US	7650,44	9,55	730,927
Japan	8546,010	6,52	556,983	Japan	8546,010	6,42	548,574	Japan	8546,01	6,22	531,526
France	1976,854	5,22	103,258	France	1976,854	5,11	101,011	China	6742,61	5,78	389,507
UK	2150,279	4,41	94,720	China	6742,606	5,02	338,165	France	1976,85	5,17	102,162
China	6742,606	4,30	289,807	UK	2150,279	4,32	92,806	UK	2150,28	4,03	86,631
Canada	7732,758	4,20	324,571	Italy	1413,827	3,92	55,409	Italy	1413,83	3,95	55,788
Italy	1413,827	3,95	55,834	Canada	7732,758	3,89	300,632	Netherlands	1813,74	3,90	70,774
Netherlands	1813,739	3,73	67,632	Netherlands	1813,739	3,76	68,185	Canada	7732,76	3,60	278,015
Hong Kong, China*	6742,606	3,09	208,090	Belgium	1831,669	3,33	60,979	Belgium	1831,67	3,37	61,720
MIN			972,319				873,716				819,23
LN			6,880				6,77				6,71
Raw			0,15				0,15				0,15
Minmax			6,25				6,25				6,25

*China distance for Hong Kong

Sources: Distances – Mayer and Zignago 2011, trade statistics – WTO Trade Statistics [online]., retrieved 2012, March 1st

2004	Distance	% of the world exports	Trade weighted distance	2005	Distance	% of the world exports	Trade weighted distance	2006	Distance	% of the world exports	Trade weighted distance
Germany	1656,772	9,87	163,536	Germany	1656,772	9,26	153,359	Germany	1656,772	9,15	151,563
US	7650,435	8,84	676,302	US	7650,435	8,59	657,228	US	7650,435	8,47	647,989
China	6742,606	6,44	433,995	China	6742,606	7,26	489,804	China	6742,606	8,00	539,374
Japan	8546,01	6,14	524,437	Japan	8546,01	5,67	484,734	Japan	8546,01	5,34	456,279
France	1976,854	4,90	96,957	France	1976,854	4,42	87,342	France	1976,854	4,09	80,926
Netherlands	1813,739	3,88	70,326	Netherlands	1813,739	3,87	70,269	Netherlands	1813,739	3,83	69,422
Italy	1413,827	3,84	54,262	UK	2150,279	3,67	78,819	UK	2150,279	3,70	79,644
UK	2150,279	3,77	81,060	Italy	1413,827	3,56	50,295	Italy	1413,827	3,44	48,658
Canada	7732,758	3,44	265,724	Canada	7732,758	3,44	265,751	Canada	7732,758	3,20	247,807
Belgium	1831,669	3,33	60,976	Belgium	1831,669	3,19	58,395	Belgium	1831,669	3,03	55,457
MIN			792,840				983,214				1025,04
LN			6,675				6,89				6,93
Raw			0,15				0,15				0,15
Minmax			6,25				6,25				6,25

2007	Distance	% of the world Exports	Trade weighted distance	2008	Distance	% of the World Exports	Trade weighted distance	2009	Distance	% of the World Exports	Trade weighted distance
Germany	1656,772	9,44	156,320	Germany	1656,772	8,97	148,634	China	6742,606	9,60	647,331
China	6742,606	8,72	587,664	China	6742,606	8,88	598,424	Germany	1656,772	8,95	148,262
US	7650,435	8,20	627,310	US	7650,435	7,99	611,011	United States	7650,435	8,44	645,509
Japan	8546,01	5,10	435,953	Japan	8546,01	4,85	414,265	Japan	8546,01	4,64	396,519
France	1976,854	4,00	79,002	Netherlands	1813,739	3,96	71,775	Netherlands	1813,739	3,98	72,151
Netherlands	1813,739	3,93	71,337	France	1976,854	3,82	75,526	France	1976,854	3,87	76,537
Italy	1413,827	3,57	50,471	Italy	1413,827	3,37	47,602	Italy	1413,827	3,25	45,965
UK	2150,279	3,14	67,426	Belgium	1831,669	2,93	53,614	Belgium	1831,669	2,95	54,125
Belgium	1831,669	3,08	56,371	Russia	1150,314	2,93	33,654	Korea, Rep. of	7611,25	2,90	221,073
Canada	7732,758	3,00	232,316	UK	2150,279	2,85	61,316	UK	2150,279	2,82	60,624
MIN			1068,591				906,386				1103,174
LN			6,974096				6,80947				7,00
Raw			0,15				0,15				0,15
Minmax			6,25				6,25				6,25

2010	Distance	% of the world exports	Trade weighted distance
China	6742,61	10,36	698,211
United States	7650,44	8,39	641,811
Germany	1656,77	8,33	137,969
Japan	8546,01	5,05	431,781
Netherlands	1813,74	3,76	68,250
France	1976,85	3,42	67,551
Korea, Republic of	7611,25	3,06	232,970
Italy	1413,83	2,94	41,526
Belgium	1831,67	2,71	49,554
UK	2150,28	2,66	57,249
MIN			1247,325
LN			7,128
Raw			0,15
Minmax			6,25

Table A.2.2 Merchandise Export Concentration, 2001-2005

EXPORT STRUCTURE, mln USD

	2001	$(e/E)^2$	2002	$(e/E)^2$	2003	$(e/E)^2$	2004	$(e/E)^2$	2005	$(e/E)^2$
Food and live animals	0,1	0,0000001	0,1	0,0000002	0,5	0,0000014	0,1	0,0000000	0	0,0000000
Food products of plant origin	2,5	0,0000413	3,7	0,0002313	3,4	0,0000637	3,9	0,0000531	7,2	0,0001544
Oils and fats of plant origin	1,4	0,0000130	0,3	0,0000015	1	0,0000055	2,9	0,0000294	0	0,0000000
Ready food products, beverages and tobacco	18,6	0,0022863	16,4	0,0045436	29,2	0,0046984	22,4	0,0017530	15,6	0,0007247
Mineral fuels, lubricants and related materials	50,1	0,0165873	44,7	0,0337544	49,1	0,0132845	44,8	0,0070121	48,1	0,0068894
Chemicals and related materials	0,2	0,0000003	0,3	0,0000015	0,1	0,0000001	0,3	0,0000003	0,5	0,0000007
Gums and plastic	1,6	0,0000169	1,2	0,0000243	1,8	0,0000179	2,4	0,0000201	2,8	0,0000233
Leather and leather manufactured goods	0	0,0000000	0	0,0000000	0,1	0,0000001	0	0,0000000	0,1	0,0000000
Wooden goods	0,1	0,0000001	0	0,0000000	0,2	0,0000002	0	0,0000000	0	0,0000000
Wood materials, paper and cartboard	44,3	0,0129691	0,3	0,0000015	0,7	0,0000027	0,1	0,0000000	0	0,0000000
Textile materials and garments	38	0,0095426	38,1	0,0245226	63,7	0,0223594	67,7	0,0160129	72,8	0,0157818
Shoes and hats	12	0,0009516	8,9	0,0013381	18,8	0,0019476	17,6	0,0010822	18,1	0,0009756
Stone, cement and azbest manufactured goods	0,7	0,0000032	0,7	0,0000083	0,8	0,0000035	1,1	0,0000042	1,1	0,0000036
Non precious metals and related goods	181,3	0,2172183	107,8	0,1963149	216,3	0,2578065	335,9	0,3941962	378,6	0,4268294
Machinery and equipment, electrotechnic, audio and video commodities	31,7	0,0066408	16,9	0,0048249	26,2	0,0037825	32,1	0,0036000	31,4	0,0029360
Vehicles, vessels and flying objects	6,2	0,0002540	3,1	0,0001623	11	0,0006668	0,7	0,0000017	0,6	0,0000011
Miscellaneous manufactured articles	0,5	0,0000017	0,8	0,0000108	3,1	0,0000530	3,1	0,0000336	2,6	0,0000201
TOTAL	**389,3**	**0,2665265**	**243,3**	**0,2657403**	**426**	**0,3046935**	**535,1**	**0,4237990**	**579,5**	**0,4543401**
Raw (Herfindahl-Hirschmann Index)	0,36		0,36		0,41		0,54		0,57	
Maxmin	30,75		30,63		36,30		51,68		55,26	

Source: Merchandise export statistics – Statistical Yearbooks of the PMR 2006 and 2011

Table A.2.3 Merchandise Export Concentration Index, 2006-2010

EXPORT STRUCTURE, mln USD	2006	$(e/E)^2$	2007	$(e/E)^2$	2008	$(e/E)^2$	2009	$(e/E)^2$	2010	$(e/E)^2$
Food and food products	15,2	0,0012968	21,8	0,0008992	25,4	0,0007483	32,9	0,0032455	54,6	0,0087141
Mineral products	0,8	0,0000036	45,4	0,0038998	94,7	0,0104025	18,9	0,0010711	16,9	0,0008349
Fuels and energy related products	0,8	0,0000036	23,4	0,0010360	41,9	0,0020364	182	0,0993205	183,7	0,0986405
Organic and non-organic chemicals	2,7	0,0000409	3,5	0,0000232	4,2	0,0000205	3,4	0,0000347	7,4	0,0001601
Leather and leather goods	0	0,0000000	0,1	0,0000000	0	0,0000000	0,4	0,0000005	0,3	0,0000003
Wood and paper goods	0,1	0,0000001	0,2	0,0000001	0,3	0,0000001	0,4	0,0000005	0,6	0,0000011
Textile materials	9,9	0,0005501	15,7	0,0004664	17,8	0,0003675	11,6	0,0004035	14,9	0,0006489
Clothes	26,4	0,0039118	30,7	0,0017832	33,8	0,0013252	28,8	0,0024870	30	0,0026307
Textile garments	31,6	0,0056046	39,5	0,0029521	51,7	0,0031004	39,6	0,0047020	55,6	0,0090362
Shoes	22	0,0027165	27,2	0,0013998	33,4	0,0012940	30,5	0,0027893	41,8	0,0051073
Stone, cement and azbest goods	0,9	0,0000045	1	0,0000019	0,8	0,0000007	0,6	0,0000011	0,4	0,0000005
Ceramic goods	0,2	0,0000002	0,9	0,0000015	1,1	0,0000014	0,5	0,0000007	0,9	0,0000024
Metals and related goods	283,5	0,4511027	474,4	0,4258146	573,5	0,3815075	208,2	0,1299743	146,4	0,0626497
Machinery and equipment	26,5	0,0039415	40,1	0,0030424	43,9	0,0022355	16,1	0,0007772	29,1	0,0024753
Other products	1,5	0,0000126	3,1	0,0000182	6	0,0000418	3,6	0,0000389	2,3	0,0000155
TOTAL	422,1	0,469189516	727	0,441338356	928,5	0,403081652	577,5	0,244846776	584,9	0,190917219
Raw (Herfindahl-Hirschmann Index)	0,58		0,55		0,51		0,32		0,24	
maxmin	55,92		52,65		47,8		25,76		16,58	

*Different classification, though it does not influence the index calculation

Source: Merchandise export statistics – Statistical Yearbooks of the PMR 2006 and 2011

Table A.2.4 Calculation of Instability of Exports of Goods and Services

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Exports (mln USD)	390,2	243,4	432,2	535,1	579,7	422,1	727,0	928,5	577,5	584,9
Import unit values	76,3	75,3	81,0	94,3	100,0	105,4	116,5	137,7	115,4	115,7
Exports deflated by import unit values	5,11	3,23	5,34	5,67	5,80	4,00	6,24	6,74	5,00	5,06
Ln(ExpDefl)	1,63	1,17	1,67	1,74	1,76	1,39	1,83	1,91	1,61	1,62

Source: Exports statistics – Statistical Yearbooks of the PMR 2006 and 2011, import unit values – IMF International Financial Statistics

$Ln(Y_t) = 0,0245t + 1,4983$
$R^2 = 0,1194$
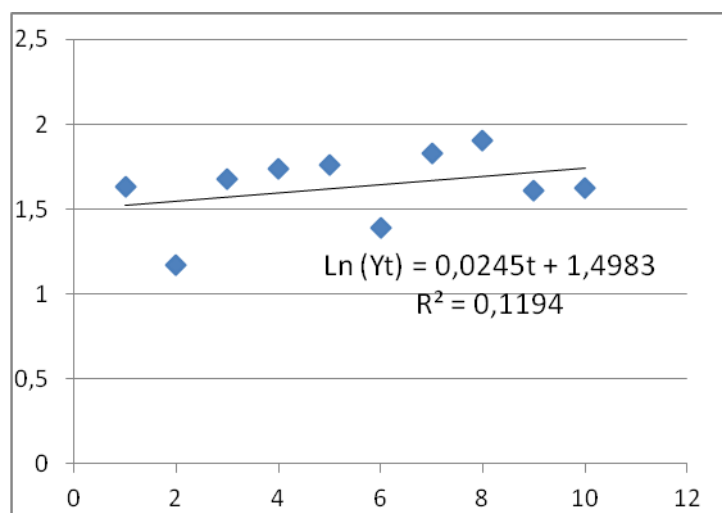
t	Ln (Yt)	Ln (Yt) estimated	Deviation
1	1,632	1,5228	0,10919
2	1,1732	1,5473	-0,37407
3	1,6744	1,5718	0,10264
4	1,736	1,5963	0,13967
5	1,7573	1,6208	0,13654
6	1,3875	1,6453	-0,25782
7	1,831	1,6698	0,16123
8	1,9084	1,6943	0,21410
9	1,6103	1,7188	-0,10850
10	1,6209	1,7433	-0,12240
		Standard error	0,19
		Maxmin	50,38

Table A.2.5 Calculation of Instability of Agricultural Production

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agricultural Production Index	118	74,6	78,5	97	80	103	48,3	198	87,9	111,9
Ln (API)	4,77	4,31	4,36	4,57	4,38	4,63	3,88	5,29	4,48	4,72

Source: Exports statistics – Statistical Yearbooks of the PMR 2006 and 2011, import unit values – IMF International Financial Statistics

Scatter plot with trend line:
$Ln(Y_t) = 0,021t + 4,4244$
$R^2 = 0,03$
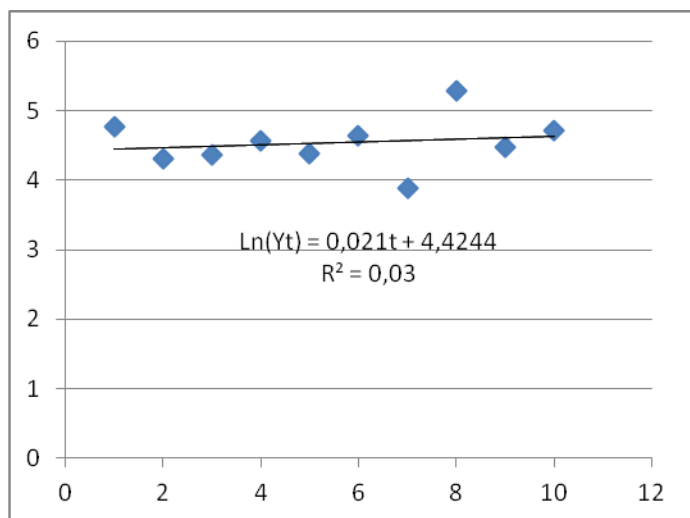
t	Ln (Yt)	Ln (Yt) estimated	Deviation
1	4,770685	4,4265	0,344184624
2	4,312141	4,4286	-0,11645949
3	4,363099	4,4307	-0,06760138
4	4,574711	4,4328	0,141910979
5	4,382027	4,4349	-0,05287337
6	4,634729	4,4370	0,197728988
7	3,877432	4,4391	-0,56166844
8	5,288267	4,4412	0,847067031
9	4,4762	4,4433	0,032899805
10	4,717606	4,4454	0,272205615
		Standard Error	0,35
		Maxmin	178,92

Table A.2.6 Retrospective EVI Calculated for Transnistria, by Components, 2001-2010

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EVI	**47,63**	**48,24**	**48,23**	**48,81**	**48,30**	**48,33**	**48,03**	**48,53**	**48,22**	**48,77**
EXPOSURE INDEX	**45,07**	**46,29**	**46,27**	**47,44**	**46,41**	**46,46**	**45,88**	**46,88**	**46,25**	**47,36**
Population (Smallness)	86,76	86,77	86,79	86,90	86,92	86,93	86,94	86,95	86,96	86,97
Remoteness (Location Index)	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25
Structural Index	30,92	35,63	41,13	60,84	60,26	61,09	55,48	54,81	30,26	25,58
-Agricultural Production share in GDP	0,17	5,00	4,83	9,17	5,00	5,17	2,83	6,83	4,50	9,00
-Merchandise export consentration	30,75	30,63	36,30	51,68	55,26	55,92	52,65	47,98	25,76	16,58
SHOCK INDEX	**50,19**	**50,19**	**50,19**	**50,19**	**50,19**	**50,19**	**50,19**	**50,19**	**50,19**	**50,19**
Natural Shock Index	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00
-Homelessness	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
-Instability of Agricultural production	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
Trade Shock Index	50,38	50,38	50,38	50,38	50,38	50,38	50,38	50,38	50,38	50,38

Appendix 3. Components of the EVI Index of some SIDS and LDCs

Table A.3.1 Small Island Developing States and Least Developed Countries: Components of the EVI index, 2009

	EVI	Expo-sure index	Popu-lation	Remote-ness	Structu-ral index	Export concen-tration	Shares, agriculture&fisheries	Shock index	Natural Shock index	Home-less	Instabi-lity of Agr.	Instabi-lity of Exports
Afghanistan	39,5	33,8	19,5	51,8	44,7	23,8	65,6	45,2	51,2	63,8	38,6	39,2
Bangladesh	23,2	17,4	0,0	36,2	33,4	35,3	31,4	29,0	44,6	76,3	13,0	13,4
Burundi	56,8	54,1	37,3	80,5	61,3	59,6	63,1	59,5	44,0	68,0	20,0	75,0
Cambodia	55,6	37,1	29,5	47,1	42,2	31,2	53,2	74,2	50,3	76,8	23,8	98,1
Comoros	56,9	67,6	73,1	62,2	62,1	44,6	79,5	46,2	21,8	43,2	0,5	70,6
Haiti	52,2	44,6	35,8	44,5	62,3	73,6	51,0	59,8	39,7	73,3	6,1	79,9
India	17,5	12,0	0,0	30,3	17,7	5,0	30,3	23,1	37,3	68,0	6,7	8,9
Madagascar	37,2	35,6	24,6	65,5	27,6	11,8	43,5	38,8	43,9	82,3	5,4	33,6
Mongolia	52,7	52,4	55,8	58,9	39,1	39,6	38,6	53,1	34,8	14,3	55,3	71,3
Pakistan	22,3	12,1	0,0	24,1	24,4	15,3	33,6	32,4	47,7	87,7	7,7	17,1
Papua New Guinea	44,6	52,7	42,1	80,1	46,5	34,4	58,7	36,4	41,7	82,1	1,2	31,2
Rwanda	55,0	51,4	35,4	77,7	57,2	45,3	69,1	58,7	62,0	43,2	80,8	55,3
Solomon Islands	58,0	78,5	81,3	75,2	76,4	78,6	74,2	37,4	37,8	55,9	19,6	37,1
Somalia	62,6	47,1	37,1	44,6	69,7	39,4	100,0	78,1	56,3	88,6	24,0	100,0
Timor-Leste	56,7	56,8	68,1	58,7	32,4	18,8	46,0	56,6	33,7	49,0	18,4	79,4
Togo	42,8	42,8	41,4	42,9	45,6	22,3	68,9	42,7	49,5	74,2	24,7	36,0
Zimbabwe	64,3	45,7	30,8	100,0	21,0	14,5	27,5	83,0	66,0	61,5	70,4	100,0

Source: UNDESA 2009 (5-6)

Table A.3.2 Components of the EVI index Calculated for Transnistria Compared with the EVI Scores of Some SIDS, 2006

|	EVI	Expo-sure index	Popu-lation	Remote-ness	Structu-ral index	Export concen-tration	Shares, agriculture&fisheries	Shock index	Natural Shock index	Home-less	Instabi-lity of Agr.	Instabi-lity of Exports
Transnistria	*48,33*	*46,46*	*86,93*	*6,25*	*61,09*	*55,92*	*5,17*	*50,19*	*50,00*	*0,00*	*100,00*	*50,38*
SIDS, *average*	56,17	67,07	80,93	71,52	34,90	44,11	25,70	45,28	46,28	54,58	37,99	44,27
Cape Verde	57,92	62,54	81,28	59,96	27,65	44,98	10,33	53,30	73,97	69,79	78,16	32,62
Comoros	63,60	76,74	74,30	78,36	80,00	91,88	68,11	50,46	24,08	40,76	7,39	76,84
Guinea-Bissau	66,18	70,54	63,73	58,99	95,70	91,40	100,00	61,83	29,35	43,79	14,92	94,30
Haiti	56,81	44,00	37,86	66,55	33,73	20,34	47,11	69,63	39,59	72,56	6,63	99,66
Kiribati	83,65	81,09	100,00	78,00	46,36	63,91	28,82	86,20	72,41	85,10	59,72	100,00
Maldives	51,98	72,53	87,91	86,03	28,27	43,74	12,80	31,43	54,70	95,87	13,54	8,16
Papua New Guinea	44,15	50,53	43,56	75,99	39,02	32,20	45,83	37,77	40,75	80,97	0,53	34,79
Samoa	64,65	80,83	96,78	89,33	40,46	59,09	21,82	48,47	65,09	97,64	32,54	31,85
Sao Tome and Principe	58,15	81,63	99,35	65,06	62,77	97,27	28,27	34,67	14,94	0,00	29,87	54,40
Solomon Islands	56,89	76,14	82,18	82,94	57,26	39,65	74,86	37,64	50,10	55,97	44,23	25,18
Timor-Leste	60,84	56,04	71,66	46,08	34,75	18,70	50,80	65,65	31,30	44,31	18,29	100,00
Tuvalu	91,85	87,17	100,00	82,94	65,72	100,00	31,44	96,53	93,06	86,12	100,00	100,00
Vanuatu, Republic of	64,25	77,02	94,73	82,94	35,69	35,75	35,62	51,48	62,44	85,40	39,49	40,51

Source: Guillaumont (2008:29-30) (except the EVI scores for Transnistria calculated in the thesis)

Appendix 4. Maps

Figure A.4.1 The Map of the Republic of Moldova

Source: International Crisis Group 2004 (29)
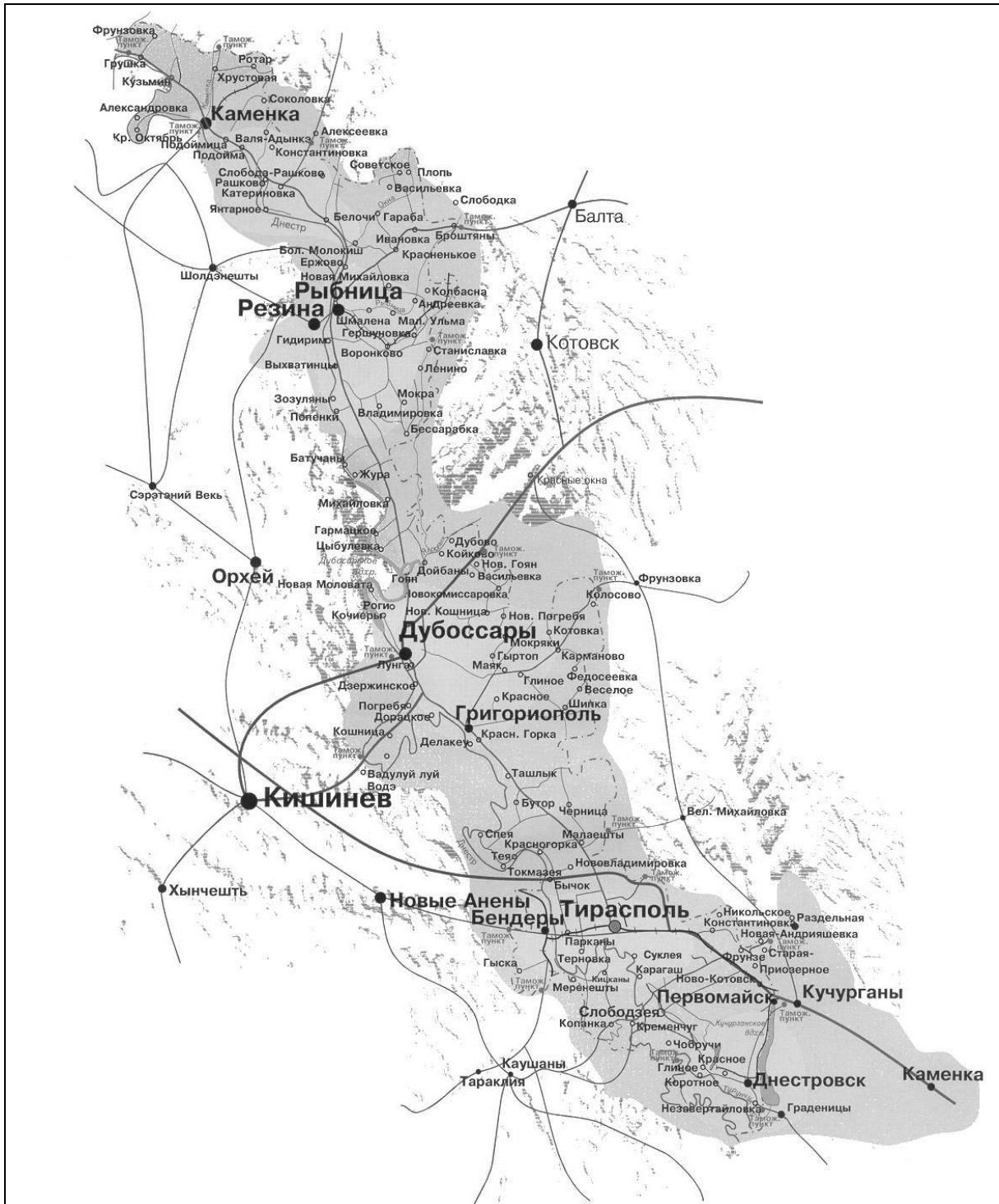
Table A.4.2 The Map of the PMR

Source: The Map of the PMR (in Russian) [online], retrieved 2012, May 2nd

Appendix 5. List of Experts Interviewed

EU/USA:

Rosario De Blasio, Operational Quality Control Coordinator and Technical Advisor to the Head of Mission, EUBAM Mission to Ukraine and Moldova, Odesa, Ukraine
Marcin Kosienkowsky, Assistant Professor at the International Relations Department, Institute of Political Science, Faculty of Social Sciences, The John Paul II Catholic University of Lublin, Poland
Nicu Popescu, Senior Research Fellow, European Council on Foreign Relations, London, UK
Vlad Spanu, President of Moldova Foundation, Washington DC, USA

Moldova:

Leonid Litra, Deputy Director, Institute for Development and Social Initiatives "Viitorul", Chisinau, Moldova
Eugen Revenco, Head of the Foreign Policy Association, Chisinau, Moldova

OSSE:

Per Enerud, Mission Spokesman, OSCE Mission to Moldova, Chisinau, Moldova

Russian Federation:

Alexander Karavaev, Deputy Director of the Post-Soviet Research Center, Moscow State University, Moscow, Russian Federation
Sergey Markedonov, Head of the International Department, Institute of the Political and Military Analysis, Moscow, Russian Federation

Transnistria/Moldova:

Ludmila Safronova, Chief Lecturer, Department for Finance and Credit, Tiraspol Taras Shevchenko State University, Tiraspol, Transnistria/Moldova
Artem Tchornyy, Secretary of the Ukrainian Community in Norway, Oslo, Norway

Ukraine:

Kornelia Luskanova, Councellor, Ministry of Foreign Affairs of Ukraine
Vitaliy Kulyk, Director of Center of Civil Society Problems Research, Kyiv, Ukraine