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SMALL ECONOMIES FACING GLOBAL CHALLENGES: THE CASE OF ARMENIA

Armenia: Example and "Special Case"

While being a huge country in terms of historical legacy and natural beauty, Armenia is a small country in terms of population, territory, and market size: her population is roughly 3 million, the largest distance within the country is less than 250 km (north-west / south-east), and Gross National Income of 2006 was 5.8 bn US$, which implies a GNI per capita of 1,920 US$ and classifies Armenia as a lower middle-income country (World Bank classification).

In addition, the Republic of Armenia, a "new nation" (independent since 1991), is not only a society and economy in the midst of a development process, but also a country in the midst of a transformation process. The degree of transformation of the political system in Armenia had been termed "moderate" at the turn of the century.[2] According to the EBRD, indicators of structural and institutional change in the economy in 2007 were mostly between "some progress" and "substantial progress".[3]

[1] The authors are grateful for research funds provided by Deutsche Bundesbank (HV Hannover) and Wolfgang-Ritter-Stiftung (Bremen).

[2] The four broad categories are (I) stable democracies; (II) moderately pluralistic political systems; (III) pre-democratic, but stable states; (IV) unstable states. See B. L. R. Smith, *What Is the State of Democracy in Post-Communist Countrie*s? "Demokratizatsiya. The Journal of Post-Soviet Democratization", 1997, Vol. 5, No. 4, pp. 533-535. Recent ratings by Freedom House, Reporters without Borders, and Heritage Foundation point in the same direction.

[3] EBRD, *Economic Statistics and Forecasts*, www.ebrd.com/country/sector/econo/-stats/index.htm, 15.01.2008. The indicators of EBRD rate transition results on a scale between 1 (little progress) and 4.3 (standards and performance typical of advanced industrial economies). For Armenia, the index values of enterprise reform and

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The country can therefore serve as an example when analyzing the particular challenges and options which small developing economies, particularly those in transition from centrally planned to market coordinated systems, face in the current globalization period.

However, as all countries are "special cases", taking one country as representative for others always is a bold endeavor. In the case of Armenia, the general picture will have to be modified by taking into account her particular history and geo-political situation: Armenia is not only landlocked and in a peripheral position with respect to the maritime-based world trade routes, the country is also in a particularly difficult geo-strategic position: Armenia's borders to its neighbors Turkey and Azerbaijan are politically and economically blockaded; Georgia is in a state of political turmoil and thus does not provide easy access to international ports; Armenia's only neighboring country to which bilateral relations are without severe tensions, Iran, is an outcast in international politics.

The main events which shaped Armenia's recent economic history were a disastrous earthquake in 1988, the loss of input markets for its fairly diversified industry after the breakdown of intra-Soviet Union division of labor and its centrally planned trading patterns after 1989, hyperinflation in 1993, and war with Azerbaijan until the ceasefire of 1994. Since 1994, Armenia's economy has registered strong growth, mostly driven by the construction sector (and fuelled by remittances from Diaspora-Armenians), the emergence of a non-traditional industry, viz. the processing of imported precious stones, as well as a closer cooperation with International Economic and Financial Organizations, such as Armenia joining the WTO in 2003.[4]

When discussing Armenia's global challenges and the way they are and can be tackled, we will focus in this paper on options and constraints deriving from the country's size and discuss size-related features of other small countries as a point of reference.

Features of Small Economies: Some Hypotheses

Small states are usually defined as sovereign territories, which in terms of population, territory, or market size fall between certain threshold values. Given today's size distribution of countries, various authors have set the upper threshold value for the number of population, the most straightforward indicator, anywhere between

competition policy are both rated at 2.3, the index values of price liberalization and forex / (foreign) trade liberalization are both 4.3.

[4] European Bank for Reconstruction and Development, *Transition Report Update 2007*, EBRD, London 2007, pp. 6-7; Asian Development Bank, *Asian Development Outlook 2007*, ADB, Manila 2007, pp. 103-107. We are also grateful for background information on Armenia from interviews with various Armenian economists in Yerevan in October 2007. Special thanks go to Professor Bagrat Asatrian, formerly chairman of the Central Bank of Armenia. The usual disclaimer applies.

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10 million[5] inhabitants and 1.5 million[6] inhabitants – and the lower threshold value, which delimits small states from *microstates* as a separate analytical category, usually at 100,000 inhabitants.[7]

The rationale for dealing with small states as a separate group of economies when discussing the challenges of globalization lies in the fact that they are not just miniature versions of "average"-sized economies. They rather exhibit particular features.[8] First, there is often a narrowly limited supply of natural resources (exceptions are vast but sparsely populated desert states); secondly, there are constraints when it comes to realizing economies of scale and scope in view of a small internal market for industrial products. Obviously, small economies among the developing world have therefore had less opportunity to diversify their industry as a precondition for economically catching-up. This results in a narrow specialization of production, which again triggers both a high degree of economic openness, especially with regard to foreign trade to obtain by imports what they cannot produce nationally, as well as a concentration in terms of exported commodities and foreign trade partners.

Following this argumentation, there are various negative impacts of the small size of an economy. First, smaller economies tend to be more vulnerable by exogenous shocks. Price volatility on world markets may strongly affect overall export earnings or GDP-growth rates of small economies. In addition, the business cycle or political events in the main trading partner countries disproportionally influence the small economies. Finally, there is a tendency of small internal markets to favor monopolies[9], which can harm the international competitiveness of the manufacturing sector of a small economy.

Some authors have argued, however, that the high integration of small economies into the world economy is not at all of negative consequence, as integration into the world market is a growth catalyst.[10] Moreover, the specialization in the commodity structure of small economies is an advantage in those international trade negotiations, which are based on the principle of equality of sovereign states, such as those in the

[5] This is the threshold value used by Simon Kuznets, one of the founding fathers of small-states research in economics: S. Kuznets, *Economic Growth in Small Nations*, (in:) *Economic Consequences of the Size of Nations*, ed. E. A. G. Robinson, Macmillan, London 1960, pp. 14-32.

[6] The World Bank, *Projects and Operations. Small States. Defining a Small Economy.* web.worldbank.org/wbsite/external/projects, 15.01.2008.

[7] In a broader view, Geser rightly suggests differentiating between "absolute", "relative", and "perceived" smallness of a country; see H. Geser, *Was ist eigentlich ein Kleinstaat?*, (in:) *Kleinstaaten-Kontinent Europa. Probleme und Perspektiven*, ed. R. Kirt / A. Waschkuhn, Nomos, Baden-Baden 2001, pp. 89-100.

[8] An excellent overview on the state of the art of small states research is provided by S. Simon, *Zukunftsfähige Wirtschaftsentwicklung von Kleinstaaten. Kleinheitsbedingte Optionen und Restriktionen am Beispiel Liechtenstein.* Liechtenstein-Institut, Liechtenstein 2006.

[9] L. Briguglio / E. Buttigieg, *Competition constraints in small jurisdictions*, "Bank of Valetta Review" 2004, No. 30, pp. 1-13.

[10] W. Easterly / A. Kraay, *Small states, small problems?*, Policy Research Working Paper No. 2139, The World Bank, Washington, D. C. 1999.

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WTO framework.[11] This means that concessions in issues, which are of no particular interest to the highly specialized small state, can be traded in against demands in the few fields of real concern. As price-taker on the world markets small states can protect their own industries due to their minor relevance, without having to be afraid of reactions by partner countries.[12] On the other hand, due to the ability of small states to charge above average prices in niche markets, it is possible to improve the economy by repositioning themselves.[13]

With respect to factor movements, the picture is similarly ambivalent. Small countries do not generally provide the internal market necessary to attract foreign direct investment (FDI) – in stark contrast to flight capital to small high-income countries, if the banking system is appropriately designed, such as in Liechtenstein. However, a high degree of trade openness along with an easily accessible, central location[14] and/or an appropriately educated and specialized labor force may help to attract FDI geared towards targeting international markets, such as (on different development levels) in Singapore or Mauritius. In addition, via remittances, the generally relatively high migration from small economies can contribute to high inflows of foreign exchange / capital.

To attract even more mobile factors of production, small states can reduce their tax rates without contributing to a downward spiral of international tax reduction.[15] In this respect it is feasible to mention that small states – due to their cultural and social homogeneity – also often seem to possess political decision-making mechanisms apt to implement economic policies more rapidly. Furthermore, a larger number of mechanisms are presumed to exist – sometimes derived from an allegedly predominating "corporatist" socio-political system[16] – to compensate potential losses from structural changes and/or opening up to the world markets.

Regarding Official Development Assistance (ODA), donors are supposed to provide much more aid (relative to GDP or per person) to smaller developing countries than to larger countries mainly due to two reasons. Firstly, in smaller countries aid can make a more noticeable difference. Secondly, in a global system, where international organizations follow the "one country, one vote"-principle, the willingness of donor

[11] R. Grynberg (ed.), *WTO at the Margins. Small States and the Multilateral Trading system*, Cambridge University Press, Cambridge 2006.

[12] H. Geser, *Was ist eigentlich ein Kleinstaat?*, (in:) *Kleinstaaten-Kontinent Europa. Probleme und Perspektiven*, ed. R. Kirt / A. Waschkuhn, Nomos, Baden-Baden 2001, pp. 89-100.

[13] M. Qureshi / D. W. te Velde, *Promoting Knowledge-based and Service Industries in Small States*, Commonwealth Secretariat, London 2007.

[14] A. Sell, *TNU in Ländern niedrigen und mittleren Einkommens*, (in:) *Neue Instrumente zur sozialen und ökologischen Gestaltung der Globalisierung. Codes of Conduct, Sozialklauseln, nachhaltige Investmentfonds*, ed. H. H. Bass / S. Melchers, Lit Verlag Münster 2004, pp. 81-96.

[15] V. Dehejia / P. Genschel, *Tax competition in the European Union*, "Politics and Society" 1999, Vol. 27, No. 3, pp. 403-430.

[16] P. J. Katzenstein, *Small States in World Markets, Industrial Policy in Europe*, Cornell University Press, London 1985.

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countries to influence as many developing countries as possible leads to a disproportionate amount of aid being allocated to small countries.[17]

Some Empirical Results: The General Picture and the Special Case

In our research, some of the conjectures made above about challenges and options of small states with special regard to the external sector have been tested or re-tested by cross-country regression analyses to provide an up-to date reference point to judge Armenia's performance.

Openness for External Trade

To analyse the consequence of size for foreign trade system we used the *foreign trade ratio* (FTR) as the dependent variable, and *population* (POP) and *area* (ARE) as independent variables.[18]

A hyperbolic form of the best fitting regression curve indicates that FTR increases rapidly the smaller the country on the left of the vertex, while it decreases only slowly the larger the country on the right of the vertex. During the globalization period – which is mirrored by the overall increase of the foreign trade ratios across countries (and arithmetically shown by the value for the intercept of the equation) – the size dependence of the foreign trade ratio became blurred (as shown by the declining correlation coefficients). Nevertheless, on average, today size still has a relevant impact (as shown by the regression coefficients) on the integration of a country into the world trade system[19]:

Eq 1, Data of 1979: FTR = 18 + 106*1/ARE + 35*1/POP (n=120, Rsq=0.63)

Eq 2, Data of 2004: FTR = 60 + 147*1/ARE + 44*1/POP (n=143, Rsq=0.28)

Figure 1 provides a graphical representation of these data and also indicates that Armenia in spite of its, in cross-country comparison, "high" actual 66 %-Foreign Trade to GDP ratio in 2004 is still below its "potential" degree of trade openness, which is 75 % – taking size into consideration.

With regard to the correlation between FTR and a country's per capita income, there is no clear picture. While Low Income Countries have an average FTR of 61 % (which is probably understated due to a substantial share of "informal" cross border

[17] D. H. Perkins / S. Radelet / D. L. Lindauer, *Economics of Development*, 6th edition, W. W. Norton, New York and London 2006, p. 535.

[18] The foreign trade ratio (FTR) is foreign trade volume to GDP. Population (POP) is in million of inhabitants and area (ARE) in 1000 sqkm. All data are from The World Bank, *World Development Indicators Database*, web.worldbank.org, 15.01.2008.

[19] The equation for 1979 was calculated by U. Menzel / D. Senghaas, *Europas Entwicklung und die Dritte Welt. Eine Bestandsaufnahme*, Suhrkamp, Frankfurt/M 1986, pp. 121-133. The equation for 2004 is our own calculation.

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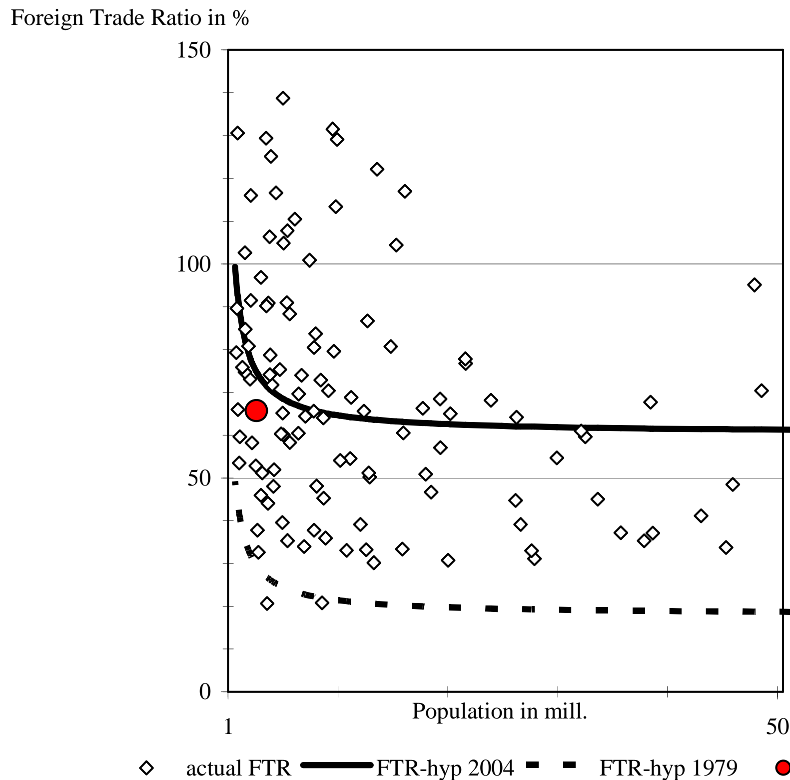
trade in poorer countries, Middle Income countries and High Income countries have virtually the same FTR (75 % and 74 %, resp.)

Figure 1. Cross Country Analysis of Foreign Trade Ratio, 1979/2004



Sources: Own computation from World Bank Data. Regression lines according to OLS estimation. The dotted line represents the 1979 estimation from Menzel/Senghaas 1986. For clarity of illustration, the graph shows only countries with less than 50 m population, while the regression used all available country data for populations larger than 1 m (1979: 120 cases; 2004: 143 cases). Squares represent 2004 values only.

Concentration of Export Commodities and Dependence on Strategic Imports

With regard to the hypothesis of a concentration of export commodities, we have used as an indicator a Herfindahl-Hirschmann-type index as *export concentration index* (ECI) on the 3-digit SITC level, normalised to obtain values ranking from 0 (completely dispersed) to 1 (maximum concentration).[20]

The results are, first, that concentration of exports diminishes with increasing per capita income: the unweighted averages being 0.46 (LICs), 0.31 (MICs) and

[20] UNCTAD, *Handbook of Statistics Database*, stats.unctad.org/Handbook, 15.01.2008.

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0.16 (HICs) in 2004 – which is trivial in so far as higher economic development in terms of income is more or less synonymous to higher economic development in terms of diversification.

Secondly, however, and more importantly, the data indicate that contrary to the above-stated conjecture, a certain, even if not very pronounced size dependency of concentration, is only relevant for high-income countries. Among the low and middle-income countries, the size of a country (as measured by the number of population) is not correlated to and hence does not predict the degree of the concentration of exports. There are LICs/MICs with a high concentration (mainly the mineral and oil exporting countries and countries exporting plantation crops – e.g. Nigeria, Angola, or Burundi) as well as LICs/MICs with a comparatively high-diversified export product structure (such as Chile, Vietnam, or Georgia): see equations 3 and 4:

Eq 3, HICs, 2004: ECI = 0.2775 – 0.0461 Ln(POP) (n=28, Rsq=0.21)

Eq 4, LICs/MICs, 2004: ECI = 0.4274 – 0.0253 Ln(POP) (n=111, Rsq=0.02)

The small size of a country thus determines the degree of its integration into the world economy, for countries in the catching-up process a small size, however, does not necessarily restrict the diversification of its exports. To overcome an economically dangerous concentration, there seems to be leeway for political measures.

It is astonishing to note, however, that the Armenian economy actually developed into a *less diversified* export structure within only a few years: the Export Concentration Index increased from 0.25 to 0.36 in the decade between 1995 and 2005. A closer look into the commodities exported (SITC Rev.-3, 3-digit-level) reveals that Armenia in the early years of its independence still had the export structure determined by the Soviet division of labour. In recent years, however, the country – although increasingly integrated into the world economy as total exports increased more than fourfold between 1997 and 2005 – has concentrated on three export areas: the export of processed precious stones, its world-famous brandy, and metals. The more subtle industrial production lines, such as steel tubes (SITC 679), machine tools (SITC 731), or optical instruments (SITC 871) have proven less competitive on world markets and have declined even in absolute terms.

With regard to the repercussions of the external sector for the internal sector, Sarian rightly points to the fact that with these products, given their low rate of added value (12 % for cut and industrial diamonds), a strategy of export-led growth rules itself out.[21] Therefore, import substitution, a temporary engine of growth in the 1990s, in fact has still not been replaced by a foreign-trade based growth strategy, which in the light of the small size of the internal market of Armenia can be deemed more sustainable.

[21] A. Sarian, *Economic Challenges Faced by the New Armenian State*, "Demokratizatsiya. The Journal of Post-Soviet Democratization", 2006, Vol. 14, No. 2, pp. 193-222.

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Table 1. Main Commodities in Armenia's Export, 1997-2005

1997		2000		2005	
667 Precious Stones	21,4%	667 Precious Stones	33,7%	667 Precious Stones	28,1%
288 NF base metal waste	11,8%	112 Alcoholic Beverages	7,5%	671 Pig Iron	25,1%
112 Alcoholic Beverages	8,8%	351 Electric current	7,0%	112 Alcoholic Beverages	8,7%
282 Ferrous waste	8,6%	288 NF base metal waste	6,1%	682 Copper	4,6%
232 Synthetic rubber	3,6%	682 Copper	3,9%	971 Gold	3,9%
283 Copper ores	3,0%	897 Jewelry	3,6%	897 Jewelry	3,7%
931 not classified	2,8%	772 Elcetrical switches	3,2%	287 ore, concentr. of base metals	3,1%
773 Equipment for distributing electricity	2,4%	971 Gold	3,2%	*Sum of above in total of export value*	*77,3%*
897 Jewelry	2,1%	287 ore, concentr. of base metals	3,1%		
716 Rotating electric plant	1,7%	232 Synthetic rubber	2,7%		
842 Women's clothing	1,5%	671 Pig Iron	2,4%		
771 Electric power machinery	1,5%	*Sum of above in total of export value*	*76,5%*		
679 Tubes of steel	1,3%				
661 Construction materials	1,3%				
731 Machine tools	1,3%				
871 Optical instruments	1,2%				
671 Pig Iron	1,1%				
Sum of above in total of export value	*75,5%*				

Source: Own computation from UNCTAD, Comtrade Data.

Armenia could, however, somewhat reduce its heavy dependence on strategic imports and increase the import of those goods relevant to increasing economic growth: While in 1996 food accounted for 33 % of imports and energy for another 21 %, ten years later these shares were reduced to 16 % each. The share of capital goods' in imports, on the other hand, increased from 11 % in 1996 to 23 % in 2006.[22]

High Impact of Remittances and Official Development Assistance

Transnational factor movements with relevance to Armenia can be seen in labor emigration and subsequent remittances, in foreign direct investment, and in capital inflows from official development assistance. All these factor movements are closely related to each other and pose interrelated options and challenges.

[22] The World Bank, *World Development Indicators Database*, web.worldbank.org, 15.01.2008.

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Firstly, migration from Armenia has a long and complex history. The Armenian diaspora (ethnic Armenians living outside of Armenia) is estimated to be more than double the size of the actual population of the Republic of Armenia: up to 8 m people. A new dimension was added when, after the dissolution of the Soviet Union, about one fifth of the Republic's population, many with a background in higher education (thus contributing to a significant "brain drain"), left the country, mainly for the Russian Federation but also for Western Europe and the US.[23]

Official remittances from the diaspora community to the Republic of Armenia amount to about 10 % of GDP (see Table 2). Including "informal" remittances, estimates rise to more than one third of the GDP.[24] The potential impacts of remittances have been much debated in development policies all over the world during the last decade. While the impact of remittances on growth is still unclear, it is now a widely accepted fact that remittances reduce the incidence and severity of poverty, reduce vulnerability to risks, and provide a source of investment in human capital (education and health).[25] For Armenia, remittances seem to be a mixed blessing. There seems to be a direct link to poverty reduction, but an alleged positive impact on the reduction of inequality (supported by some household studies) seems generally implausible in the light of the social composition of those who left the country. Furthermore, in Armenia remittances are mostly used for real estate purchases.

Predominantly denominated in US$, the remittances have contributed to a significant appreciation of the exchange rate of the Armenian currency and probably to a deterioration of the export competitiveness in manufactures.

Secondly, along with an increase in remittances, during the last few years (since 2004), starting from a low level (see Table 2), FDI inflows have also increased significantly. This investment was mainly geared towards the construction sector, telecommunication, air transport (see below), and food processing.

Thirdly, relative to its population, Armenia receives a high share of official development assistance (ODA): 71 US$ per inhabitant in 2006. This fits very well into the overall picture – as a simple regression between ODA per capita and the size of the population shows and thus validates the hypotheses stated above regarding the "hidden agenda" of donorswhen providing ODA (see equation 5 and figure 2):

Eq 5, data of 2006: $\log_{10}$ (ODA pc) = 160404 $\log_{10}$ $POP^{-0,543}$ (n=145, Rsq=0.59)

In the case of Armenia, the instability of the South Caucasus region in combination with a foreign policy of Armenia, which – even if for different reasons – attempted a sort of equidistance to Russia, to the US, the EU and Iran may provide additional reasons for the high amount of ODA.

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[23] B. W. Roberts et.al., *Remittances in Armenia: Size, Impacts, and Measures to enhance their contribution to development*, USAID/Armenia, Yerevan 2004, p. 57-58. Different estimates: A. Mansoor, / B. Quillin (eds.), *Migration and Remittances. Eastern Europe and the Former Soviet Union*, The World Bank, Washington D. C. 2006, p. 123.

[24] B. W. Roberts et.al., loc. cit. 2004, p. 1.

[25] Summed up in: The World Bank, *Global Economic Prospects. Economic Implications of Remittances and Migration*, The World Bank, Washington D. C. 2006.

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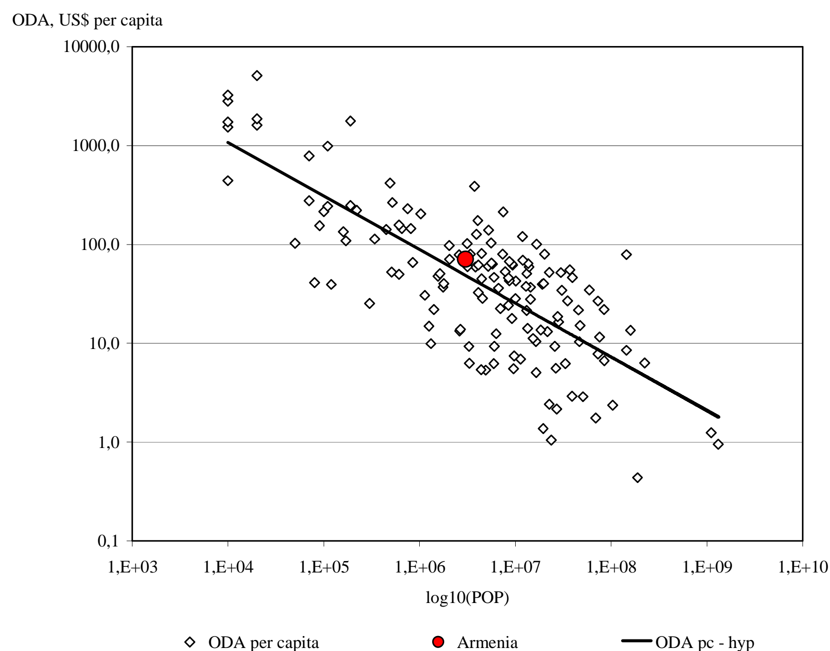
Figure 2. Cross Country Analysis of ODA receipts, 2006



Source: Own Computation with data from OECD, *Statistical Annex of the 2007 Development Co-operation Report*, www.oecd.org/document/html.

Table 2. ODA, remittances, and FDI inflows, Armenia 1995/2004 [million current US$]

Type of capital inflow	1995	in % of GDP	2004	in % of GDP
Foreign direct investment	25	1,7 %	219	6,1 %
Official development assistance	218	14,8 %	254	7,1 %
Remittances	65	4,4 %	340	9,5 %
GDP	*1,468*	---	*3,577*	---

Sources: UNCTAD, *Foreign Direct Investment Database*, http://stats.unctad.org/FDI/; OECD, *Statistical Annex of the 2007 Development Co-operation Report*, www.oecd.org/document/html; Mansoor, A. / Quillin, B. (eds.), *Migration and Remittances. Eastern Europe and the Former Soviet Union*, The World Bank, Washington D. C. 2006, p. 125; The World Bank, *World Development Indicators Database*, web.worldbank.org, partly via World Resources Institute, *Searchable Databases*, http://earthtrends.wri.org /searchable_db, 15.01.2008.

Due to the high capital inflows, money aggregates increased. Nevertheless, CPI inflation remained low (2.9 % in 2006). The reason for this development is that the Armenian authorities have managed foreign exchange inflows by maintaining a broadly flexible exchange rate (with occasional interventions to even out volatility) as well as by

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a tight fiscal policy. The overall fiscal balance was as low as -1.9 % in 2006.[26] Given low tax revenues in international comparison, however, this fact provides few opportunities for an endogenous state-based development, where funds are needed for government activities from infrastructure building to social security – a fact that will bear serious consequences in the event of political vicissitudes.

Economic Vulnerability and Resilience to Exogenous Shocks

The vulnerability of an economy to exogenous shocks depends on factors such as the high concentration of export commodities, the dependence on strategic imports, as well as the susceptibility to economic conditions in the main partner countries. To cover these factors comprehensively, a variety of indices has been constructed, all of them with specific advantages and drawbacks, including the subjective choice of variables, problems of measurement, and weighting.[27] These drawbacks put aside, most cross-country tests with these indices – somewhat tautologically – came to "the conclusion that there is a tendency for small states to be more economically vulnerable than other groups of countries".[28]

In addition to this, Briguglio et al.[29], by constructing a "resilience index", have rightly pointed to the fact that some countries may do well in spite of being highly exposed to external shocks: they recovered quickly from shocks, withstood the effect of a shock, or even completely avoided shocks. The main factors for resilience are seen in sound macroeconomic policies, microeconomic market efficiency, good governance, and social development. Not surprisingly, there is a strong correlation between per capita GDP and economic resilience as defined in this sense.

The result of the combined effort on measuring vulnerability and resilience to shocks is that on average the richer they are, the better small economies can combat external shocks. In this sense, Armenia (which was not covered, probably due to lack of data, by this study) can probably be considered a "worst-case" combination (high vulnerability, low resilience) rather than a "best-case" combination (vice versa, such as the Singapore case).

However, if taking the volatility of annual growth rates of GDP as an albeit debatable proxy for vulnerability[30], one finds that Armenia, has been a rather "stable" economy since the mid-1990s, comparing favorably to other post-soviet economies and even to some of the world's leading economies (see Table 3). In this perspective, the

[26] IMF, *Republic of Armenia: Fifth Review Under the Three-Year Arrangement Under the Poverty Reduction and Growth Facility*, IMF, Washington D. C. 2007.

[27] A very useful overview is provided by L. Briguglio, *Measuring Vulnerability*, www.unep.org/ourplanet/imgversn/103/17_mea.htm, 15.01.2008.

[28] L. Briguglio et al., *Conceptualizing and measuring economic resilience*, Economics Department, University of Malta, Valletta 2005, home.um.edu.mt/islands/-resilience_index.pdf, p.6

[29] L. Briguglio et al., loc. cit., 2005.

[30] L. Briguglio, loc. cit., 2008.

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small size of the Armenian economy did not mean a disadvantage – at least during the period under consideration, which after all encompassed two major shocks to the world economy: the Asian Financial Crisis of 1997 and the end of the New Economy Bubble in 2001.

Table 3. GDP Growth Volatility in Post-Soviet Economies and in Some Reference Countries, 1996-2005

Country	Volatility Index	Country	Volatility Index
China	*101,0*	Georgia	125,7
Latvia	108,6	Kyrgyzstan	146,4
Uzbekistan	109,3	*Germany*	*146,7*
United States	*113,1*	Kazakhstan	158,0
Estonia	118,1	Russian Federation	241,5
Belarus	118,2	*Japan*	*250,4*
Armenia	120,6	Turkmenistan	306,6
Azerbaijan	124,8	Tajikistan	339,7
Lithuania	124,8	Ukraine	579,7

Source: Own computation from United Nations, *Common Database*, unstats.un.org/UNSD/databases.htm, 15.01.2008. GDP growth rates are in 1990 prices. The growth volatility index is computed as $I = 100*(1/n*\sum((g_i-g_{avg}) / g_{avg})^2)$, where g_i denotes yearly average GDP growth rate, and g_{avg} denotes average growth rate over the whole period of n=10 years.

Meeting Further Challenges by Developing the Service Sector

A precondition to overcoming potential handicaps from the smallness of the economy and to being prepared for future global challenges would be that Armenia broadens its economic growth and its export basis, and prudently manages the capital inflows.[31] Two potential areas, which can make use of the specific geographic conditions of Armenia and would not be negatively influenced by the size of the country, are exports of tourism services and export of air transport services (while ICT-based services seem to be less feasible given the fact of an isolated language with few speakers in combination with a peripheral geographical position).

Some foundations for such a strategy are visible. In May 2007, a new international airport terminal was opened in Yerevan (Zvartnots) with funding from a diaspora-

[31] Other issues which cannot be discussed here in the context of the external sector only but which are also of high relevance are poverty reduction and strengthening the basis for tax revenues; see IMF, *Republic of Armenia: Fifth Review Under the Three-Year Arrangement Under the Poverty Reduction and Growth Facility*, IMF, Washington D.C. 2007.

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Armenian with the objective of providing in a hub-and-spoke approach a passenger and freight hub between Western Europe, Russia and East and South Asia. A total passenger turnover of 1.4 m passengers in 2007[32], however, still dwarfs Zvartnots against the 34 m passengers of the Middle East's fastest growing airport, Dubai, in the same year. Zvartnots could only develop into a mayor challenge to the geographically similarly positioned Persian-Arabian Gulf Airports only if cheap oil, whether from Azerbaijan or Iran, were accessible for Armenia – something which is presently completely beyond all imagination. Furthermore, security issues in the South Caucasus region will continue to be relevant for the future development of the airport.

This is even more so the case with the second pillar of a service-export based growth pattern: tourism. Within ten years, tourism receipts have increased tenfold, from 14 m US$ in 1995 to 161 m US$ in 2005; the number of tourist having visited Armenia rose to about 400,000 in 2006.[33] Presently, however, more than half of Armenia's "tourists" are in fact diaspora-Armenians visiting their ancestral country. According to the World Economic Forum's world competitiveness index of travel and tourism – which is not a "beauty contest" but rather "measures the factors that make it attractive to develop the travel and tourism industry of individual countries" – Armenia ranks only 74th out of 124 countries.[34] Tourism is not only a particularly delicate industry with regard to security issues, but also heavily dependent on the accessibility and attractiveness of neighboring regions when developing a new destination. This is of particular relevance for small countries, where typical durations of stay are short, and which international tourists tend to visit in combination packages.

To make the best use of its natural and cultural treasures for a – in view of the environmentally precarious area: necessarily very prudent – tourism industry, the small countries of the South Caucasus region first require stability.

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Summary

Small states are not just miniature versions of “average”-sized economies; they rather exhibit particular features. This paper analyzes – both with cross-country comparisons and in a case study of the Republic of Armenia – with special regard to the external sector, the openness to external trade, the concentration of export commodities and the dependence on strategic imports, as well as the high impact of remittances and official development assistance. It concludes that economic vulnerability to external shocks is not a necessary consequence of the small size of an economy – neither in general nor in the case of Armenia. To further meet the challenges of the global economy, small states are well advised to concentrate on industries where economies of scale are irrelevant, especially in the service sector – however, with due consideration of the special geo-political conditions of a country.

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