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## Information Needs and Institutional Development\*

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### Abstract

This paper investigates the difficulties that arise when public institutions lack access to vital information necessary for the enforcement of their mandate. We incorporate evidence and examples from governance in the Republic of Armenia to demonstrate the gains that would occur with improved access. We outline the information problems, describe the principle impediments to governance that occur, and discuss the tools incorporated in other countries to help determine the information. We conclude with policy recommendations that would improve the measuring the informal sector in ways that will lead to better governance and efficiency.

Key Words: institutional arrangements, shadow economy, law enforcement  
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# 1 Introduction

Armenia faces severe constraints on many significant determinants of economic growth. Some of these are relatively exogenous factors, such as the natural geography that prevents easy market access and the closed border that dampens integration into the global economy. Some, however, are relatively endogenous, such as capital accumulation or technological development. We focus in this paper on institutional development, and particularly the impact of information needs.

The role of information dissemination in economic development has generally been analyzed for its part in efficient capital markets and macroeconomic policy. Recent developments, however, have shifted the focus to information theory and institutional economics.<sup>1</sup> The potential impact on governance, particularly relating to institutions, has had a major influence on the recent spread of Freedom of Information (FOI) laws, which over fifty countries (including Armenia) have adopted in the past twenty years, and another thirty are drafting such statutes.<sup>2</sup>

Recent research has suggested that information flows can have a strong impact on governance and institutional quality. Islam (2003) shows that countries providing better economic information, in terms of quantity and quality, also score much higher for their governance and rule-of-law. Chan-Lee and Sanghoon (2001) suggest that an environment supporting institutions and governance is the leading factor for global information dissemination. Bellver and Kaufmann (2005) argue that information flows as supported by FOI laws are necessary, but not sufficient conditions for the efficient dissemination. Their analysis shows that the information has to be implemented by public institutions that have successfully reformed their internal cultures.

Institutional development in Armenia is affected by information flows in two major ways. First, many institutions rely on properly collected economic data as a vital input into developing proper policy. Barriers to access of necessary information remain a major impediment to the implementation of the law for many agencies, which can have dramatic negative impacts on policymaking and economic development. These barriers often tend to arise from a suspicion of government (which is often justified) or a general neglect of obligations under law. The rampant violations of paper laws requiring

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<sup>1</sup> See Chan-Lee and Ahn (2001)

<sup>2</sup> See Bellver and Kaufmann (2005)

information declarations, from tax and customs to statistical evidence on market activities, challenge the development of institutions that rely on such evidence to conduct their business.

Second, these flagrant violations have a significant impact on informal, or “shadow”, market activities. For multiple reasons, much of the economic activity in Armenia continues to remain within the informal economy. Entrepreneurs tend to operate in the shadow sector if the potential benefits outweigh the costs associated with the formal sector. Bagrat Tunyan, in a paper presented at the 2005 AIPRG conference, estimates its current value around 40% of GDP, down from 75-90% in the late 90’s. One principle result is that policymakers are limited in their ability to assess accurately the nature of the economy. Tunyan argues that one cause of the shadow economy in Armenia is that national statistical services and information-sharing between state bodies was underdeveloped in the early stages of transition.<sup>3</sup>

UNCTAD’s 2002 *National Human Development Report* (NHDR) points out the challenges to competition in Armenia due to distortions that arise from information problems and the shadow economy. We highlight these difficulties from the perspective of a single state agency, the State Commission for the Protection of Economic Competition (SCPEC), which is charged with implementing competition (or “antitrust”) laws in Armenia. The structural change in adopting market-based laws is chastened by the need to create effective mechanisms for the enforcement of those laws, particularly through strong institutions.

As with most legal reform, many countries have found that adopting competition laws may be the easiest step towards an effective policy and the real challenge lay in their implementation.<sup>4</sup> In this paper, we describe the principle impediments to governance that occur due to the information flows and discuss the tools incorporated in other practices to help determine the information. We also discuss the direct impact of the informal economy on institutional development, and the concerns of private firms on the role of government in overseeing and protecting the rules of a market economy.

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<sup>3</sup> He does point out that these types of activities no longer constitute a major portion of the informal economy.

<sup>4</sup> See Nicholson (2004)

At present, no government ministry or state agency is responsible for general oversight of the informal economy in Armenia. Recent survey evidence suggests that the business community believes that such oversight should be handled by SCPEC.<sup>5</sup> We discuss this evidence, and outline an argument that the competition agency may be best suited for taking on some responsibility for this issue.

We conclude with policy recommendations that would improve the measuring the informal sector in ways that will lead to better governance and efficiency.

## **2 SCPEC Background**

The Armenian competition agency, SCPEC, is an ideal candidate to analyze the difficulties of information dissemination, as it was recently designated the most transparent state agency in the country.<sup>6</sup> The difficulties that it faces in properly developing sufficient data are symptomatic of widespread problems.

Competition policy, known as antitrust in the United States, is a relatively new concept in Armenia. Competition laws have rapidly developed as a means of conducting market-based policy over the past 10 years, in part reflecting the influences of multilateral legal structures in the increasingly interdependent global economy.<sup>7</sup> The Law on the Protection of Economic Competition (LPEC) was drafted in December 2000, instituting at the time the State Commission for the Protection of Economic Competition (SCPEC). This law is part of a series of market-based laws, also including Securities, State Registration, Licensing, Customs, Bankruptcy, and the institution of the Economic Court, all between October 2000 and May 2002.<sup>8</sup> SCPEC is charged with the protection and promotion of economic competition and the development of businesses in Armenia. This generally includes cases on mergers, abuse of dominance, and cartels.

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<sup>5</sup> The AUA's Turpanjian Center for Policy Analysis (TCPA) as a subcontractor to USAID's Commercial Law and Economic Regulation Program (CLERP) conducted the survey "Armenian Competition Policy Business Survey". A full analysis of this survey is available as Nicholson and Mirzoyan (2005).

<sup>6</sup> Freedom of Information Center of Armenia (FOICA)

<sup>7</sup> Many of these laws, such as intellectual property rights, are motivated by the World Trade Organization (WTO). Competition (along with other "Singapore Issues" such as transparency and procurement regulations) are not under the jurisdiction of the WTO, but are increasingly being considered part of a "recipe" for market-based success. Clarke and Evenett (2003, p10) note that at the time of their writing many WTO members had not adopted any form of competition laws.

<sup>8</sup> Apricot Plus's (2003) *SME Sector Assessment Update*

Competition is a serious issue in Armenia, and the competition agency still has great strides to make in the implementation of its mandate, based on a recent survey of businessmen. The 2005-06 *Global Competitiveness Report* (GCR) ranks Armenia 110 out of 117 countries in the effectiveness of its antitrust policy. The report is based on a sample of 107 businessmen. Armenia also ranked 112 of 117 for the “intensity of local competition”, 115 on the “extent of market dominance” (by a few business groups), and 109 for the “effects of privatization on competition and the environment”.<sup>9</sup>

Table 1 lists the responses to these questions for the nine CIS countries included in the GCR’s survey. The first column under each question is the mean score given in response to the questions, the second column is the ranking out of the domain of countries in the survey, and the third column is the ranking compared to other CIS countries. Note that every CIS country was ranked in the lower half of the survey in every listed category regarding competition, and CIS countries made up the lowest three spots in the effects of privatization.

**Table 1 CIS Responses on Competition in GCR**

Country	Effectiveness of Antitrust Policy			Intensity of Local Competition			Extent of Market Dominance			Effects of Privatization		
	Score	Rank		Score	Rank		Score	Rank		Score	Rank	
<b>Armenia</b>	2.6	110	8	3.4	112	8	2.4	115	8	3.7	109	5
<b>Azerbaijan</b>	2.8	105	7	3.8	101	6	3.2	84	4	3.8	104	3
<b>Georgia</b>	3.2	87	3	4.2	85	4	2.9	95	7	4.6	79	1
<b>Kazakhstan</b>	3.5	73	1	4.4	77	3	3.6	69	1	3.7	107	4
<b>Kyrgyz Republic</b>	2.5	113	9	4.2	89	5	2.3	116	9	2.6	117	9
<b>Moldova</b>	3.1	90	5	3.2	116	9	3.0	94	6	4.1	95	2
<b>Russian Federation</b>	3.0	94	6	4.5	73	1	3.0	93	5	3.3	115	7
<b>Tajikistan</b>	3.2	89	4	3.7	105	7	3.3	78	2	3.6	111	6
<b>Ukraine</b>	3.4	75	2	4.5	74	2	3.3	79	3	3.3	116	8

Bellver and Kaufmann (2005) show that their transparency index is positively correlated with the 2004 GCR competitiveness index. This suggests that transparency can have a positive impact on the competitiveness of local businesses, through lower uncertainty and efficient investment. They also found transparency to be positively associated with control of corruption and government effectiveness.

<sup>9</sup> It should be noted that Armenia did rank 1 of 117 for one category, “the ease of hiring foreign labor”, with Georgia ranked second.

Effective competition policy can produce strong impacts on national welfare and economic growth, far surpassing the necessary investments. The benefits of competition policy on national welfare are shown to be significant, but indirect or complementary. Clarke and Evenett (2003) show the potential benefits to government spending simply through the prevention of bid-rigging. They compare the potential savings assuming 15% or 20% markups from cartelized bids and compare it to the budget of competition authorities. In the seven countries reviewed, the potential savings for the national treasury amounts from 3 to 170 times the budget of the competition agency.

Like many newly-created market institutions, SCPEC has faced significant hurdles in reaching a critical mass within the general public regarding its mandate and competencies. This particularly affects competition agencies, which generally rely on complaints generated by the public in order to conduct their normal activities. The low level of awareness in the Armenian business community remains a principle hurdle for SCPEC to carry out its mandate.

The effectiveness of the agency is very sensitive to proper information. Much of the casework requires obtaining microeconomic commercial information, essentially firm data. In its 2004 program of activities, the agency specifically described the “shadow economy” as a major issue restricting competition, and commented on the difficulties that arise from it, particularly for the results of analyses in goods markets.

The problems with information are common for competition agencies in transition economies. The legacy of central planning and the current widespread “crony capitalism” creates a reluctance and potential hostility for information requests. Kovacic (2001) argues that before courts have validated the authority of competition agencies for data collection, business managers may resist information requests and sometimes threaten violence against public officials. This is a particularly frustrating problem when deciphering the ownership structure and relations between firms, which can have dramatic impacts on antitrust violations.<sup>10</sup> However, even full access to information can prove uninformative, as the presented data may be inaccurate.

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<sup>10</sup> Kovacic is discussing general conditions in transition economies, but the point is particularly apt for Armenia.

Slay (1996), in an edited volume of competition policy in post-communist countries, sets aside an entire section to discuss the preponderance of issues related to data collection. He points out that in the CIS countries (and Mongolia), authorities grant nothing more than “lip service” to official statistics on concentrations and monopoly. These data problems affect measuring and interpreting concentration levels, as well as market definition. Generally, statistical agencies do not include the full impact of import or export data, nor do they gather comprehensive sale figures for smaller firms and often fail to fully account for appropriate demand and supply elasticities.

Torok (1996) outlines the serious issue of identification of market participants for the early stages of the competition agency in Hungary, a country that has successfully implemented an effective antitrust regime in a formerly planned economy. At the time, there existed the possibility that subsidiaries of one firm might acquire several competitors, and without proper identification of the ownership there is no easy way to determine whether such a shift in market structure were to increase or decrease concentration in the market. This phenomenon is referred to as “cross-ownership”. Torok concludes that with these problems the transition process for competition policy will have an institutional or legal focus. This is likely to prove true for Armenia until the problems of implementation can be overcome.

The 2002 NHDR outlined these problems for the Armenian competition agency. In addition to issues related to the LPEC and methodology at the commission, the *collection of information* and *perception by business circles* were highlighted as significant impediments to implementation of the competition law. This included both distorted information about commodity markets and distortions arising from the shadow market due to “the unsatisfactory state of the information field”.

Concentration levels are widely used as a general indicator of market power within a particular sector or industry. Industry concentration is usually used for measuring market structure in an industry. Most competition agencies, including SCPEC, publish concentration measures in their annual reports, and incorporate them for policy work.<sup>11</sup> Slay (1996) points out that without appropriate data, the derived concentration figure for certain markets may be inaccurate. This yields improper judgments about the value of

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<sup>11</sup> The US DOJ-FTC guidelines outline specific roles for the use of concentration indicators (HHI) in analyzing merger cases.

investigations into particular sectors and calls into question much of the policywork based on them.

SCPEC traditionally includes a similar measure, the three-firm concentration ratio (CR-3) in its publications. The CR-3 shows the market share of the three largest firms, which gives a proxy for the concentration of a particular product market. Table 1 replicates the table from the 2004 program.

**Table 2 Concentration Ratios for Sectors of Armenian Market<sup>12</sup>**

	Number of market participants			CR-3		
	2000	2001	2002	2000	2001	2002
Petrol	X	14	10	X	58.10	58.80
Diesel fuel	X	35	21	X	54.67	69.88
Vegetable oil	X	25	X	X	59.17	X
Animal fat	X	24	X	X	61.73	X
Pharmaceutical products	77	72	X	28.83	30.06	X
Coffee	20	21	X	72.00	57.30	X
Sugar	X	9	12	X	98.00	100.00
Metal	X	114	X	x	69.65	X
Champaign and sparking wine	6	18	X	95.30	89.42	X
Cognac	17	13	X	95.10	85.80	X
Beer	5	6	14	99.56	99.70	95.87
Ethyl spirit	X	20	X	X	95.15	X
Vodka	X	47	X	X	80.41	X
Wine	X	40	X	X	45.60	X
Sodium salt and sulfur	2	2	X	X	X	X
Cigarette without filter	X	6	5	X	97.43	99.92
Soft drinks	54	X	X	88.15	X	X
Mineral water bolting	20	48	X	74.80	66.63	X
Ice cream	8	10	10	86.30	85.16	80.91
Tuff	X	47	X	X	37.77	X
Granite	X	5	X	X	79.68	X
Marble	X	2	X	X	X	X
Basalt	X	16	X	X	82.59	X
Cement	X	2	X	X	-	-
Plaster	2	2	X	-	-	X
Pressed gas	X	X	21	X	X	66.78
Wheat flour	X	19	24	X	80.70	65.73
Wheat	X	22	X	X	63.14	X
Cigarette with filter	X	12	10	X	81.66	87.84
Passenger traffic	X	75	X	X	20.70	X
Tourism	X	24	X	X	36.60	X

As can be seen, many of these sectors are extremely concentrated amongst the three largest firms, including sugar and non-filtered cigarettes which both round up to 100% market share in 2002.

<sup>12</sup> SCPEC 2004 Annual Program of Activities



The agency's report qualifies the actual measure of most product markets due to unreported or unregistered market activity. As we discuss in section four below, the challenges to accurate reporting of information can have a fundamental impact on the proper determination of effect or harm by a firm under the competition law.

### **3 Institutional Impact**

The impact of the informal sector on policymaking in Armenia typically has been examined with macroeconomic considerations, such as with tax or customs revenue.<sup>13</sup> Proper statistical measures would also dramatically improve the capabilities of the public agencies charged with helping to protect the market-based structures that lead to economic efficiency. The absence of informal market information in official statistics affects major economic indicators such as GDP and unemployment, with derogatory effects on tax revenues and fiscal policy. Islam (2003) discusses the range of information useful for economic decisions, from price information to the disclosure of government processes and laws. She focuses on how the availability of basic economic data affects governance, and how the legal framework governing access to information might improve governance.

Focusing on the impact on one particular agency, SCPEC, allows for an intensive analysis of the costs of imperfect information, along with practical suggestions for effective reforms. The caseload at SCPEC is heavily dominated by information requests. This arises in part to a lack of enforceable powers for a failure to comply, as well as a reluctance by firms to pass along proprietary and sensitive material to government agencies. 54 of the 116 decisions undertaken at SCPEC in 2005, through October, involved data requests or penalties for failures to comply with such requests.

At mature competition agencies, such as the US Federal Trade Commission, considerable resources are expended on drafting appropriate requests for information. However, these are always linked to direct cases, and the nature of the information requests leads directly to a conclusion (which is usually a settlement with outside parties). In its early years, SCPEC undertakes regular market analyses to ascertain the impacts of concentrated markets. The slow response rates to information requests tend to bog down the commission in bureaucracy.

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<sup>13</sup> See, for example, UNDP (2002).

### 3.1 Impact on Role of SCPEC

The recent survey of businesses in Armenia provides significant insight into some of the determinants of the lack of information flows.<sup>14</sup> AUA/TCPA conducted the survey during the summer 2005 in order to provide an overview of issues facing the implementation of competition law in the country. One recurring theme throughout the responses was the depth of mistrust of government officials.

Table 3 provides survey results about various characteristics on business development. These results show that Armenian businesses are responsive to domestic market conditions, and that characteristics of a free enterprise system (capital, demand, etc.) have the most impact on their development. Two oft-maligned culprits of the “transition” period, large firms and corruption, have the most unfavorable impact. Corruption had the highest “unfavorable” ratings, in that 225 total firms said that it had an unfavorable impact on their business. Note, however, that Armenia had a relatively high ranking of 71 of 117 countries on “the business costs of corruption” in the GCR survey.

**Table 3 Characteristics of business development and whether favorable**

	Enormous/Great				Some/A little				No Impact			
	fav.	unf.	neith.	dk	fav.	unf.	neith.	dk	fav.	unf.	neith.	dk
Access to financial capital	226	68	10	1	45	14	8	1	7	11	11	0
Friendships or family relationships with people who control resources or make decisions	71	10	8	2	98	12	15	4	34	20	123	5
Strength of market demand	207	41	13	7	75	13	13	3	10	1	18	1
Access to necessary inputs	171	35	10	3	74	13	14	1	19	1	59	2
Access to export markets	46	12	4	2	19	4	6	2	17	4	268	17
<b>Aggressive action by large firms</b>	<b>3</b>	<b>70</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>47</b>	<b>3</b>	<b>0</b>	<b>50</b>	<b>46</b>	<b>168</b>	<b>8</b>
Access to market information	109	11	4	2	107	18	19	8	23	6	89	6
Access to means of resolving commercial disputes	36	10	2	1	74	14	21	4	46	10	171	13
Access to public utilities, e.g. electricity, telecom, transportation	149	66	7	1	85	28	8	2	17	2	36	1
System of government licensing and regulation	62	35	7	2	80	26	15	6	49	3	107	10
Competition from other domestic firms	82	70	6	3	67	34	8	4	37	10	74	6
Competition from imports	18	23	2	0	14	8	7	2	29	5	272	22
<b>Corruption (bribery, favoritism, extortion)</b>	<b>3</b>	<b>112</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>63</b>	<b>3</b>	<b>0</b>	<b>48</b>	<b>50</b>	<b>112</b>	<b>3</b>

<sup>14</sup> See *supra* note 5.

Aggressive action by large firms was the second-highest unfavorable, with 163 (40%) of the firms saying it was unfavorable. Both of these categories had much higher unfavorable ratios amongst firms that said the characteristic had an “enormous” or “great” impact on their business development. Note, however, that 272 (68%) of the firms said that the aggressive action of large firms had “no impact” on their business development.

Access to financial capital plays a large role when compared to other characteristics. 305 firms, or 76%, replied that it had a “great” or “enormous” impact on whether they develop their business, and 278 firms said that this characteristic had a favorable impact. Traditional market factors also featured highly in business development, particularly for market demand and access to necessary materials. The extent to which basic infrastructure impacts business operations in Armenia is shown in the responses about access to public utilities, in which 28% of firms expressing an opinion listed it as unfavorable.

One of most important factors for development of businesses is access to market information, although the survey responses about access to market information were fairly mixed. 126 (31%) of the firms said that such access had “great” or “enormous” impact, but 124 (also 31%) of the firms said it had “no” impact. 239 (59%) of the firms said that market information had a favorable impact, but 112 (28%) said it was neither favorable nor unfavorable.

Other key areas provide insight into existing perceptions about commercial activity in Armenia, particularly involving understood roles of oligarchs. The survey evidence does not support the idea that internal connections, or clan relationships, play a significant role in Armenian business activity. Only 91 (23%) of the firms said friendships or family relations had a “great” or “enormous” impact on this development, and 182 (45%) of the firms said that such relations had no impact at all. 203 (50%) of the firms said that this had a favorable impact on their business development.

Access to international markets appears to have little impact on business development in Armenia. 306 (76%) of the firms said that access to export markets had no impact on their decision to develop their businesses, and 328 (82%) of the firms said that access to imports had no impact. 278 (69%) of the firms said export markets were neither favorable nor unfavorable, and 281 (70%) said competition from imports was neither

favorable nor unfavorable. In a small, open economy such as Armenia, with relatively few natural resources, export markets should provide a significant portion of revenue for firms. The closed border seems to take this advantage away, to the point that firms do not even consider international markets to be influential in their business development. It is probably surprising to nobody that the non-tariff barriers for the republic appear to have a substantial microeconomic impact.

### **3.2 SCPEC Mandate and the Shadow Market**

Some respondents demonstrated a strong version to bringing cases before the competition agency, which partly reflects a general disillusionment with public officials. For example, 152 (38%) of respondents said they would “never” take a case to SCPEC, which includes 105 (26%) of the firms that responded they are “not familiar” with SCPEC. That is, over a quarter of the firms are certain they would never take a case before the agency even though they are not even familiar with it.

This reluctance to engage the state agency could reflect a misunderstanding of its mandate, which we discuss below. However, it also reflects a deep-rooted mistrust in government in Armenia. Only 226 firms, or 56%, expected the government to enforce competition laws, and 153 (38%) did not. There is considerable sentiment by the business community of a lack of trust in government, that the laws will not be enforced because it is not “profitable” for government, that parliamentary members own the largest businesses and thus will not enforce the laws. Many simply stated that “everything in Armenia is corrupt”. Regardless of knowledge of laws or familiarity with SCPEC, or inclination to take a case forward, there clearly exists some enthusiasm and thought given to how commercial laws can be implemented in Armenia.

Suggested mechanisms for assisting in the implementation are fairly interesting and, at times, quite imaginative. Four firms listed “revolution” as a means of improving implementation of the competition law, one citing specifically a revolution to eliminate democracy. One respondent suggested oversight by the Ministry of Interior, Security, and Defense. Four firms listed “democracy”. Many responses referred to changing the “mood” of government, while some referred to development of civil society or market mechanisms.

The survey provided information that may clarify some of these trends. Table 4 replicates a table from the business survey analysis. It describes responses to questions about where firms obtain information about conducting business, according to their familiarity with SCPEC and willingness to take a case.

**Table 4 Information, Familiarity, and Willingness to Take a Case**

Willingness to take a case to SCPEC	Where information about conducting business is gathered									
		Gov't Agency	TV	Newspapers	Radio	Internet	Biz/Trade Association	Word-of-mouth	Noone	Other
<b>Familiar with SCPEC (n=137)</b>										
Def.	y	4	1	0	0	1	1	0	7	16
	n	22	25	26	26	25	25	26	19	10
Likely	y	4	0	0	0	0	0	0	3	4
	n	7	11	11	11	11	11	11	8	7
50/50	y	0	0	0	0	0	0	0	4	10
	n	14	14	14	14	14	14	14	10	4
Un-likely	y	10	0	0	0	2	1	4	8	24
	n	32	42	42	42	40	41	38	34	18
Never	y	4	1	2	0	2	0	3	13	22
	n	40	43	42	44	42	44	41	31	22
<b>Unfamiliar with SCPEC (n=265)</b>										
Def.	y	5	0	0	0	0	0	5	10	31
	n	46	51	51	51	51	51	46	41	20
Likely	y	1	0	0	0	1	2	1	1	14
	n	17	18	18	18	17	16	17	17	4
50/50	y	3	1	1	0	0	0	0	4	16
	n	21	23	23	24	24	24	24	20	8
Un-likely	y	10	1	2	0	2	1	7	22	19
	n	51	60	59	61	59	60	54	39	42
Never	y	16	2	2	2	2	1	9	35	45
	n	89	103	103	103	103	104	96	70	60

Firms familiar with SCPEC but would never take a case are more likely to get their information from newspapers, and firms that are unfamiliar with SCPEC but would never take a case relatively more likely to obtain their information from business/trade associations.<sup>15</sup> This suggests that newspapers may be a source of misinformation about SCPEC. It also suggests that business/trade associations may create a stigma against state agencies or official involvement, or perhaps that firms with such a bias may tend to go to business/trade associations for information.

<sup>15</sup> The pattern is similar for answers to “economic information”, particularly for the firms familiar with SCPEC but would never take a case. 16 of such firms said they get their economic information from newspapers.

### 3.3 Barriers to Implementation

Access to information requests from private parties has continually been emphasized in reference to successful implementation of the LPEC.<sup>16</sup> Reynolds (2005) made numerous specific recommendations on how to improve information requests, including stronger penalties for non-compliance. Amendments to the competition law since that report have strengthened the penalties, from about USD 200 to USD 1000 for a first violation and USD 2000 for a second violation. Reynolds also suggested that granting SCPEC authority for conducting inspections under the Law on Verifications may substantially benefit its investigative powers, with necessary amendments to the LPEC in order to outline the full breadth of powers.

#### *Abuse of dominance*

The challenge to obtaining information is exacerbated by a lack of trustworthiness in the data obtained, which often has the same discrepancies as found in data reported to tax agencies. This can have a dramatic impact on the work of the agency. Consider cases of abuse-of-dominance, which include fundamental pillars of competition policy. The statutes of protecting against dominance abuse, particularly as they are applied in the United States and the European Union, focus on both creating a level playing field for small firms in a market with one large firm or protecting consumers against monopolist or near-monopolist firms.

Under the current Armenian competition law, firms are considered dominant if its consumption volumes are at least 33 $\frac{1}{3}$  % of the overall market, and they are registered as such in SCPEC's ledger and are subject to monitoring. Their actions are then considered "abuse" if they engage in the types of trade restraints outline in Article 7 of the law, which essentially parallels Article 81 of the European law on competition.

The appropriate designation of a firm as "dominant" in Armenia involves two steps. First, proper procedure requires an appropriate definition of a product market, and then a determination is made whether the firm meets the requisite threshold of one-third consumption share. The latter step basically involves dividing the firm's volume by the full volume of the market. The very nature of a firm being "dominant in its market"

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<sup>16</sup> See McArdle (2002) and Nicholson and Melikyan (2005) for examples.

involves the market definition. The most famous misstep in antitrust history occurred at the US Supreme Court over an incorrect market definition in a dominance case, during a 1956 decision on *US v. DuPont*. In the case, the Court accepted the proposed market definition of “flexible wrapping materials”, in which DuPont did not have a dominant position. However, later commentators have noted that the proper definition of the market is for “cellophane”, in which DuPont enjoyed 87.5% market share. Note that authorities made this mistake even with full information at their disposal. With inaccurate or incomplete information, the proper judgment may have been impossible to determine.

The threshold criteria currently in use at SCPEC depends, crucially, on having accurate statistics about consumption volumes for both the individual firm and the defined market. Improper data distorts the measure of market share. These activities cannot generally be calculated due to undeveloped statistical systems or ineffective information-sharing between state bodies. SCPEC generally depends on either the State Tax Service or reports from individual firms for its data. Unfortunately, this data is often unreliable, and thus poses great risks to the proper delineation of dominant position as currently outlined in the competition law.

Another threat for defining markets is that the research performed by SCPEC shows that, in some sectors, the reported volumes are much smaller than is possible when comparing production, import and export data. Consider, for example, the agricultural sector. The agricultural product in Armenia is not taxed, and thus it is impossible to estimate how much of agricultural product (milk, meat, etc ) is sold in markets, or what portion of it is reprocessed. Many cases are simply suspended at the commission due to lack of proper information, including recent cases on flour/wheat and mineral water.

The research in flour/wheat market for 2004 shows that the volume of that market to be approximately 136,000 tons. Three companies have large volumes, accounting in total for about 72% of the market. According to data produced by the entities, about 141,000 tons were produced domestically and 14,000 tons was imported. However, there exists inconsistency between numbers presented by the Tax Inspectorate and similar entities. For example, the companies provided data to SCPEC showing 130,000 tons in sales, but only 53,000 tons were sold according to the Tax Inspectorate. The difference is not insignificant.

In the mineral water market, SCPEC analysis showed that 9,121.8 thousand liters were produced during the first six months of 2005 was produced of mineral water, of which 7,385.7 thousand liters was Jermuk water. There are 25 economic entities registered in the market, including two importers. Two major firms from Jermuk dominate the mineral water market: “Jermuk Group”, with 38.4% of the market by production, and “Jermuk Mother Factory”, with 33.7%. At a public hearing in which the commission sought to recognize both as dominant, were “Jermuk Group” presented new, additional information, which decreased their share to 27%. Due to this discrepancy, the case was simply suspended.

Neither of these cases involved any allegations of antitrust violations, but they both highlight the difficulties that occur involving data collection at the competition agency.

#### 4 The Informal Sector

One particularly interesting result from the TCPA survey showed that the business community tends to believe the informal market to be within the mandate of competition law, as shown in Table 5. While this can appropriately be interpreted as a charge for further advocacy efforts by SCPEC, it provides a useful insight into how “competition” is generally perceived in Armenia. The greatest challenge to a free and fair market may be the actions of firms in the shadow market, which would provide an impetus for the expansion of SCPEC’s mandate.

**Table 5 Whether covered by law, whether important**

	Covered by competition law			Importance of coverage		
	yes	no	dk	Very/somewhat	not very	dk
<b>Unregistered activity</b>	151	55	196	354	34	14
<b>Operation of informal sector firms</b>	149	61	192	361	29	12
<b>Regulation of sectors in the market</b>	126	75	201	323	63	16
<b>Price fixing by competitors</b>	125	80	197	307	78	17
<b>Market Foreclosure/Prevention of Entry</b>	118	80	204	305	69	28
<b>Aggressive conduct by very large domestic firms</b>	117	86	199	342	45	15
<b>Price Regulation</b>	116	86	200	302	88	12



<b>Political Influence of Large Firms</b>	115	78	209	329	47	26
<b>Mergers/Acquisitions</b>	106	81	215	275	104	23
<b>Aggressive conduct by very large foreign firms</b>	70	123	209	301	83	18

The trend also holds for responses about the importance of coverage. More respondents said they believe that it is “very” or “somewhat” important for the competition law to cover unregistered activity or the operation of informal sector firms than any other activities. Aggressive conduct by very large domestic firms was also perceived to be a relatively important activity to be covered.

329 firms believed it important that the political influence of large firms be covered by the competition laws, and only 32 firms believed it “not at all” important. This is particularly interesting, given the debate on competition policy and political economy. It is a widespread perception that implementation of the competition law is impacted by the role of business influence in the National Assembly. There appears to be some need for political will behind SCPEC, and a change in the relationship of business to government for effective implementation of the competition law.

The survey responses about likely targets of enforcement also highlight the relationship between business and government, as shown in Table 6. The most popular expected target involved firms lacking good relations with government representatives, with a solid majority of respondents believing that it is “very likely”. This suggests that respondents do expect targeting by the agency for firms out of favor with public officials.

**Table 6 Likelihood of implementation**

	Likelihood of implementation				
	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Don't know
Large, foreign owned firms	81	105	74	104	38
Large, domestically owned firms	111	119	65	83	24
Firms wholly or partially owned by the government	76	119	71	94	42
Firms in the Formal Sector	94	93	78	88	49
<b>Firms in the Informal Sector</b>	<b>167</b>	<b>114</b>	<b>39</b>	<b>55</b>	<b>27</b>
Firms lacking good relations with government representatives	227	77	33	37	28
Firms recently privatized	81	97	74	67	83
Firms with monopoly license from government	109	71	61	115	46

The responses for government licensing was mixed, with 180 respondents saying it was likely firms with monopoly licenses would be principal targets, and 176 respondents saying it was unlikely. Firms with a monopoly license, or large, foreign firms, were those targeted as “very unlikely”. This reflects a misperception, however, since the highest frequency of cases at SCPEC – and certainly the most publicized – is against ArmenTel, which meets both criteria.

Behind firms lacking good relations with government representatives, the largest responses were for firms in the Informal Sector. Given this recurring theme, we investigate the possible influence of the informal sector on competitive markets in Armenia.

Apricot Plus’s SME report lists three primary market constraints to “unfair competition”, including monopolies in distribution networks, intellectual property rights, and *black market activities*. We suggest that strong consideration be given for oversight of these activities to be added to SCPEC’s mandate. Although it is not a traditional power of competition agencies, the Commission may fill an oversight void left open by ineffective state/government agencies.

A large literature exists on informal economies and the subject remains quite controversial on such issues as the definition of shadow economy activities, the estimation procedures, and the use of their estimates in economic analysis and policy aspects. The informal economy consists of companies that operate partially or wholly outside the law by avoiding taxes, ignoring product -quality and -safety regulations, infringing copyrights, and sometimes even failing to register as legal entities.<sup>17</sup> In this way, these companies gain a cost advantage against their law-abiding counterparts. Formal companies in turn miss profits and market share and thus lack the means and incentives to invest in productivity-enhancing measures such as expanding capacity, installing new technologies, and improving the organization. Together, such problems handicap the economic-development process.

Tunyan (2005) argues that the shadow sector in Armenia has developed in large part due to corruption, which provides incentives for firms to hide their activities. This is

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<sup>17</sup>See McKinsey (2004)

highlighted by the common situation in which public officials own businesses and create favorable conditions outside the existing laws, or in which wealth generated by shadow activities has helped individuals obtain public offices.

Since firms in the informal sector are, by definition, working outside legal channels, no particular agency has direct oversight over their activities. Agencies such as Tax, Customs, Prosecutor’s Office, MFE, Statistical Service, etc., have some responsibility in ascertaining information from the informal market in order to conduct their activities. Specific oversight, or attempts to limit or eliminate the shadow market, tend to be performed by non-governmental organizations. The 2002 NHDR points out that in an economy where the playing field is not level for all economic actors, simply strengthening the tax agency to fend off unreported information can be dangerous and inefficient.

SCPEC is the state institution primarily charged with the responsibility to keep a level playing field, and the business community perceives a role for the competition agency in providing oversight over shadow markets. It is particularly interesting that firms believe that SCPEC is responsible for unregistered activity or the informal sector, even more so than price-fixing or market foreclosures. Perhaps businesses naturally relate issues of competition to the shadow market; perhaps the firms working outside the tax and registry laws are also generally guilty of antitrust violations.<sup>18</sup>

Note that Armenia ranked 102 out of 117 countries for “favoritism in decisions of government officials” in the 2005-06 GCR index. Table 7 lists various CIS responses in the *GCR* about the legal/tax/informal sector in their respective countries. Note that Armenia ranked relatively high in questions about the extent of the informal sector, irregular tax payments and the business costs of corruption. This is especially true when compared with the relatively low rankings on competitive markets in the country.

**Table 7 CIS Responses on Legal/Tax/Informal Sector in *GCR***

<b>Country</b>	<b>Efficiency of Legal Framework</b>	<b>Extent of Informal Sector</b>	<b>Irregular Tax Payments</b>	<b>Business Costs of Corruption</b>
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<sup>18</sup> Firms generally admitted that they did not know what conduct is covered by the competition law. An average of 192.2 firms answered “Don’t Know” to questions of particular conduct. This is consistent with only 93 firms knowing that Armenia had a competition law. 182 firms listed “don’t know” to each of the options, 26 listed “yes” to all the options, and 19 listed “no” to all the options. 175 firms thus gave varied responses to the questions. The responses of those firms carried similar patterns to the full population.

	Score	Rank	Score	Rank	Score	Rank	Score	Rank				
<b>Armenia</b>	2.7	93	6	4.7	68	3	4.6	67	2	3.9	71	2
<b>Azerbaijan</b>	3.2	71	2	4.5	60	1	4.5	73	4	4.2	60	1
<b>Georgia</b>	2.4	103	8	5.0	78	6	4.2	84	7	3.5	86	4
<b>Kazakhstan</b>	3.2	72	3	4.8	74	5	3.9	87	5	3.5	85	3
<b>Kyrgyz Republic</b>	2.3	108	9	6.3	117	9	3.0	109	8	2.4	116	9
<b>Moldova</b>	2.8	86	5	4.7	69	4	5.2	50	1	3.2	99	5
<b>Russian Federation</b>	2.6	95	7	5.5	106	7	4.6	69	3	2.9	109	8
<b>Tajikistan</b>	3.3	67	1	4.7	67	2	2.6	116	9	3.0	107	6
<b>Ukraine</b>	2.9	81	4	5.7	112	8	4.2	84	6	2.9	108	7

Based on the results from the GCR, Armenia may be efficient, relative to other CIS countries, in its oversight of corruption and the informal sector, although still well below the mean for all countries included in the survey. Note, however, that the question on taxes refers specifically to “undocumented extra payments or bribes in connection with annual tax payments”, and does not address the issue of asymmetric tax payments that lead to unfair competitive advantages.

National income and governance impact both the level of transparency and impact of information flows. Bellver and Kaufmann (2005) show that transparency tends to vary systematically with national income. Countries with more wealth are generally more transparent. However, they also show that substantial improvements in transparency do not require a great deal of resources. Islam (2003) finds that information flows are positively correlated with better governance, which implicitly suggests that information flows have a close relationship with economic growth. She finds that information is more useful in countries with a tendency towards democratic, rather than autocratic, regimes.

## 5 Policy recommendations

We argue that a stronger emphasis on information flows, particularly from unregulated economic activity, can significantly improve institutional development in Armenia. This is particularly true for the Armenian competition agency, SCPEC, whose work could benefit greatly by incorporating information from the informal economy.

Our principle recommendation is that the competition agency in Armenia assumes the authority to obtain information on unregistered firm activity. We also recommend that the agency be granted significant oversight over informal markets. Together, these competencies will empower the institution to better enforce its mandate, and also challenge the anticompetitive situation that may arise from asymmetric reporting requirements.

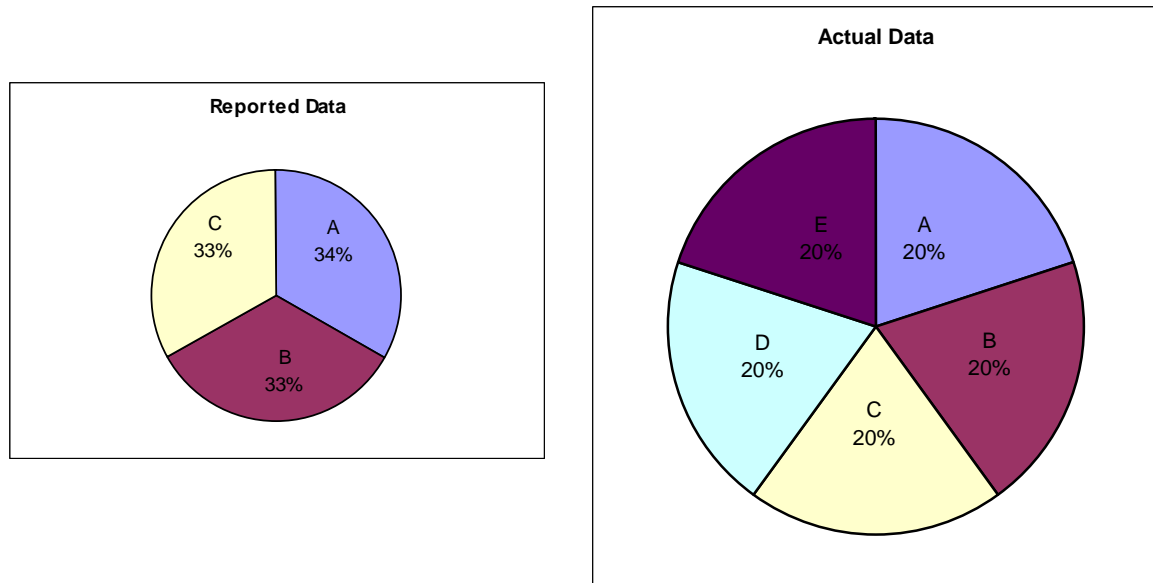
One way to avoid the impact of the issue of unreported data would be to amend the LPEC to eliminate both the requirements of a threshold of market share and the practice of maintaining a registry. This would put the Armenian competition agency more in line with international best practices. Like many competition laws drafted in Central and Eastern Europe since 1991, the Armenian LPEC was based on EU law and principles. Some of the words directly reflect the prevailing competition law for the European Union, Articles 81 and 82 of the Treaty of Rome. The procedures adopted by SCPEC also tend to reflect European approaches to market share threshold.

Brussels, however, like most antitrust jurisdictions, has been moving in the same case-specific procedures that emphasize the *effects* of competition violations. The leading method is a determination of significant market power (SMP) rather than “dominance” as defined by market share.

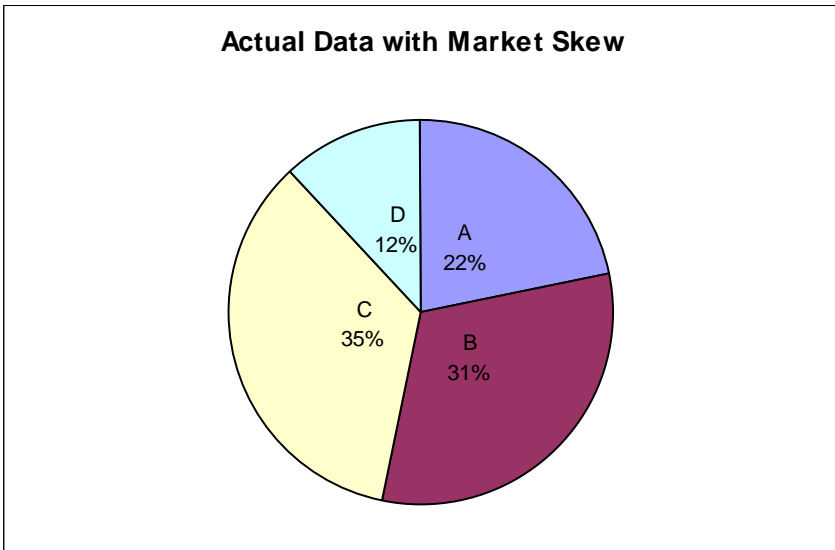
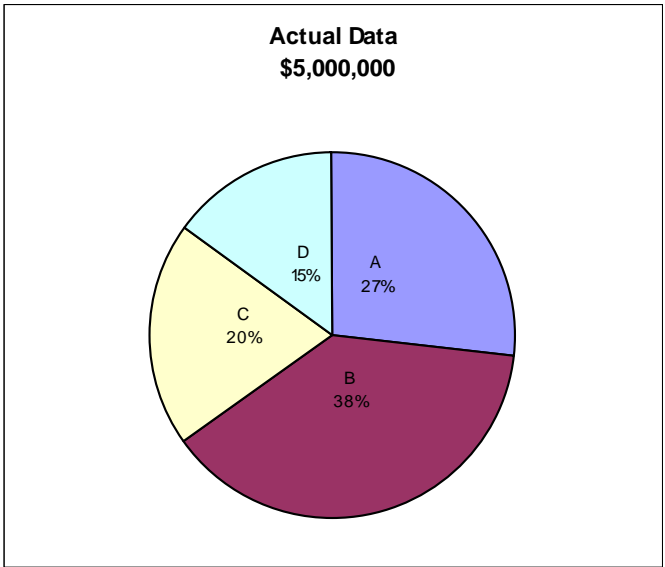
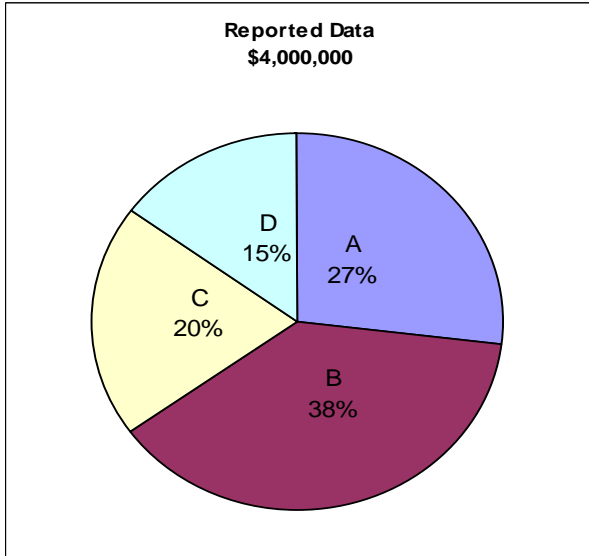
The figures given in the competition law of  $33\frac{1}{3}\%$  market share would then be taken as a guideline rather than an exact threshold. Given the amount of noise in the data, regardless of bias, a firm could be in a range of, say, 30-35% market share (or more) and still be on either side of the threshold. The calculated market share would be supplemented by additional information in order to have a determination of dominance. An alternative would be to shift away from an emphasis on market share in determination of dominance.

Given that the market threshold currently exists under law, and the potential difficulties for being listed in the Registry is fairly high, firms face a risk of being punished specifically for abiding by the tax laws. Consider a sector in which five firms are active, and with equal market share, but only three report their data to the tax authorities. The official statistics would thus list the tax-reporting firms at  $33\frac{1}{3}\%$  each. All three firms would be subject to being labeled “dominant” and included in the Registry. However, at 20% actual market share, it is less likely that any firm could muster the necessary

Significant Market Power to be subject to sanctions due to antitrust violations. This is illustrated in Figure One. Clearly, if the competition commission were to adhere strictly to official information, it would be in the unenviable position of drafting decisions against firms *because* they are obeying the laws on reporting.



A second issue arises when all firms are registered, but they all underreport data. Figure 2 illustrates how this could skew the market analysis. In the first figure, actual data suggests that Firm B has a market share of 38% in a total market of \$4,000,000. It is possible that all firms underreport in the same fashion, say by 20%, making the actual market \$5,000,000, but the same market shares prevail. The second figure shows how the reported data then represents an unbiased sampling. However, if firms underreport at different values, then the situation could be the third figure. Now, Firm B only has a market share of 25%, but Firm C has a market share of 35%.



This problem could be overcome if the focus were on actions of firms – and consumer harm – rather than market share. However, given the current status of the LPEC and the institutional tradition of the Registry, a more practical solution may be to incorporate the practice of ascertaining *actual* market share instead of *reported* market share; that is, SCPEC should develop the habit of determining the size of the informal market in necessary sectors for specific cases.

There are many tools available for this determination using indirect analysis. For example, in many sectors, firms require a high level of resources (energy, etc.) in carrying out production. SCPEC could make a determination of implied market share based on resource use, or other inputs. Alternatively, the agency could examine downstream uses of a product. If the firm in question sells its product to retailers, in competition with unregistered firms in the same product market, then the Commission could obtain information from these retailers to derive estimates about the market share of the upstream markets.

The legal basis already exists for this activity. As Reynolds (2005) points out, Article 28(2) of the LPEC obligates economic entities to provide all necessary documents for formal decisions of the Commission. One potential impact could be a strong response by informal firms in the sector to protect their interests. Presumably, the firms are in the shadow market for a reason, and they would lose some advantages if the state agency revealed the true market shares. If these reactions provide to be violations of the LPEC, such as foreclosure in the market or unfair practices with regard to the downstream retailers, the SCPEC *must* have authority to hold these firms responsible. *If* the agency's mandate is limited to the formal sector, the incentive exists for firms to remain in the informal sector in order to avoid sanctions on anticompetitive practices. The first step, therefore, is to add resources and improve inspection authority.

One possible option would be to create institutional firewalls between SCPEC and agencies, such as Tax or Customs, which could use the information against the firms. This is certainly not a first-best solution, but it would create less resistance in the market for non-reporting firms to avoid the accurate depiction of market share. It would leave the responsibility of tax collection with the tax agencies, but would allow the competition agency to make accurate decisions in the realm of competition.

The relationship between political influence and informal activities would presumably lead to countervailing forces from the categories in Table 6 above, as the firms in the informal sector lacking good relations with the government are perceived to be the principle targets of enforcement.



## 7 Conclusion

Like many countries in transition, Armenia faces many challenges in developing institutions necessary to support a market economy. One specific area involves the impact of transparency and information dissemination on governance. This paper shows the potential benefits to improving information flows on the state agency charged with the implementation of competition policy, SCPEC.

Recent survey evidence from the *Global Competition Review* shows that Armenia ranks fairly strongly relative to the rest of the CIS in terms of handling corruption or the informal sector, but struggles in nurturing a competitive economy. Recent evidence from a survey of businesses in Armenia suggests that the private sector does not have a solid comprehension of the role of competition policy in the country, nor do they appear to understand the means of undertaking cases against antitrust violations.

We provide examples of the challenges facing SCPEC with regard to information flows, and make suggestions for improvement of its daily casework. This includes a shift towards international best practices for determining market power and a charge for its mandate to include informal market activities.

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