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Final Report

Kyrgyzstan Construction Materials Value Chain Stakeholder Analysis

August 2015

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This study is made possible by the American people through the United States Agency for International Development (USAID). The study was conducted by SSG Advisors in cooperation with International Business Council (IBC) and JIA Association under Construction Materials Value Chain Program of the USAID Business Growth Initiative (BGI) Project, implemented by Deloitte Consulting LLP.

The authors' views expressed in this report do not necessarily reflect the views of the United States Agency for International Development or the United States Government

ACRONYMS

AoS	Association of Stonecutters
BGI	Business Growth Initiative
EH-EN	European Standards (Европейский стандарт)
FDI	Foreign Direct Investment
IBC	International Business Consulting
GOST	State standards (ГОСТ – Государственный стандарт)
ISO	International Organization for Standardization
JIA	Association of Young Entrepreneurs
KNS	Qualifier of state standards КГС (Классификатор государственных стандартов)
KRU	Kyrgyz-Russia University
KSUCTA	Kyrgyz State University of Construction, Transport, and Architecture
SAACHCS	State Agency for Architecture, Construction, Housing and Communal Services
SSG	SSG Advisors
SNiP	Building Code (СНИП – Строительные нормы и правила)

CONTENTS

Executive summary	5
Background	7
1 Methodology	8
2 Profile of the Construction Materials Value Chain	11
2.1 The Kyrgyz construction value chain	11
2.2 Employment	13
2.3 Competition	14
2.4 Markets	15
2.5 Recent performance	16
2.6 Purchasing criteria and assessed performance	18
3 The Planning Process and Construction Standards	20
3.1 Planning and applications	20
3.2 Construction standards	21
4 Market Forecast	24
4.1 Current housing market situation and new construction	24
4.2 Government market forecasts	25
4.3 Scenarios for new residential construction	26
5 Uncertainty of the Customs Union	27
5.1 Customs Union scenarios	28
6 Recommendations	29
6.1 Upgrading construction materials through national standards	30
6.1.1 Upgrading National technical standards for the construction industry	31
6.1.2 Upgrading the product and process capabilities of manufacturers	32
6.2 Establishing a more effective and efficient planning and application process	33
6.3 Establishing business programs to improve construction material contracting and manufacturing	34
6.3.1 Enhance existing business associations	34
6.3.2 Development of business support services	35
6.4 Proposed work plan	38
Appendix 1. Government Roles and Responsibilities in the Construction Sector	41
Appendix 2. Executive Summary – Interim Report	44
Appendix 3. SSG/ IBC Survey	46
Appendix 4. SNiP Building Codes	53

TABLES AND FIGURES

TABLE 1. BREAKDOWN OF CONSTRUCTION VALUE CHAIN SURVEY RESPONDENTS BY ACTIVITY	10
TABLE 2. NUMBER OF FIRMS IN THE KYRGYZ CONSTRUCTION VALUE CHAIN, BY EMPLOYEE SIZE BAND	14
TABLE 3. PROCEDURE AND LIST OF CONSTRUCTION PERMISSION DOCUMENTS	20
FIGURE 1. KYRGYZ CONSTRUCTION VALUE CHAIN, LOCAL ACTIVITIES	12
FIGURE 2. OWNERSHIP OVERLAP OF CONSTRUCTION	13
FIGURE 3. EMPLOYMENT CHANGE SINCE 2014	14
FIGURE 4. LOCATION OF MAIN RIVALS	15
FIGURE 5. LOCATION AND TYPE OF BUYERS OF LOCAL CONSTRUCTION PRODUCTS AND SERVICES	16
FIGURE 6. INPUT COST INCREASE FOR CONSTRUCTION COMPANIES	17
FIGURE 7. DECLINE IN ORDERS FOR CONSTRUCTION PRODUCTS AND SERVICES	17
FIGURE 8. DECLINE IN NUMBER OF BUYERS FOR CONSTRUCTION COMPANIES	18
FIGURE 9. IMPORTANCE AND PERFORMANCE ASSESSMENT – MANUFACTURERS	19
FIGURE 10. IMPORTANCE-PERFORMANCE ASSESSMENT - RAW MATERIAL PRODUCERS	19
FIGURE 11. CONSTRUCTION STANDARDS IN-USE	23
FIGURE 12. PURCHASE OF LAND ZONED FOR NEW HOUSING CONSTRUCTION, 2014 Q1 AND 2015 Q1	24
FIGURE 13. SALES OF LAND ZONED COMMERCIAL, 2014 Q1 AND 2015 Q1	24
FIGURE 14. SALES OF APARTMENT FLATS, 2014 Q1 AND 2015 Q1	24
FIGURE 15. SCENARIO FOR NEW RESIDENTIAL CONSTRUCTION DEVELOPMENTS	26
FIGURE 16. COMPANIES' INFORMATION ABOUT CUSTOMS UNION	27
FIGURE 17. WILL THE CUSTOMS UNION BE GOOD FOR BUSINESS?	28
FIGURE 18. POSSIBLE IMPACT OF THE CUSTOMS UNION	29
FIGURE 19. QUALITY DIMENSIONS	35
FIGURE 20. INTEREST SHOWN FOR INDUSTRY SUPPORT FOR MANUFACTURERS AND RAW MATERIAL PRODUCERS	37

EXECUTIVE SUMMARY

The Kyrgyz construction value chain consists of four integrated activities: raw materials and materials processing, manufacturing of construction materials, construction and contracting services, and services pertaining to markets.

The IBC database identified 344 companies undertaking activities related to the construction value chain. Developers manage the application processes and organize the financing. Most developers also manage the construction projects.

Construction and contracting services are locally based, as are the key distribution, wholesale, and retail buyer markets. The main construction contracting activities are brick masonry, concrete mixing and forming of the foundations and walls, and internal installation of basic windows, elevators, and utilities. Distributors import steel from Russia and Kazakhstan, and to a lesser extent, China.

Local production of basic raw materials includes sand, clay, and coal used for bricks, gypsum for cement, dry mix plaster, and plasterboard, limestone (calcium carbonate) used in Portland cement (and concrete); and limestone for sand tiles. Local manufacturing includes brick, cement and concrete. Limited production occurs in glass and window frames, paint, and basic plastic piping although most of the material inputs are imported.

According to the National Statistic Committee (Kyrgyz Republic) 244,900 people are registered to work in the Kyrgyz construction sector in 2013. It is estimated that 35 percent of these workers are employed outside the country.

40 percent of local companies are micro size firms (between one and nine employees) while 44 percent are small firms (between 10 and 49 employees).

Over 70 percent of manufacturers indicated that competition is primarily with local firms. Limited competition occurs between local raw material producers and Kazak companies and between local manufactures and Chinese firms.

The construction industry primarily services the local market. The export market for construction materials is limited to a small number of companies. Results from the SSG/ IBC survey indicated that Kazakhstan is the most important export market. 14 percent of construction material manufacturers and 25 percent of raw material producers export to Kazakhstan. Uzbekistan is the second most important export market with 17 percent of raw material producers, five percent of manufacturers and six percent of service providers selling products and services in this market.

Business performance in the first quarter (Q1) of 2015 has been mixed. Input costs, such as electricity, have increased. Orders have dropped from the previous year due to developers not planning many new builds.

Construction material safety and quality standards are overseen by the State Agency for Architecture, Construction, Housing and Communal Services (SAACHCS). A limitation to the coordination of quality inspections and permit provision is the lack of a coherent government plan on construction and zoning.

GOST are a set of technical standards that cover energy, oil and gas, environmental protection, construction, transportation, telecommunications, mining, food processing, and other industries. Quality and safety standards fall within the GOST codes. Within the GOST standards are building codes and regulations (SNIIP).

The certification of construction materials and on-site verification is housed under the Republican Center for Certification of Construction. The construction material certification standard for the industry is the Construction Norms and Regulations (SNIIP), which is a holdover from the Soviet Union. The Kyrgyz SNIIP practices have not been updated to include contemporary international construction material standards. Also, SNIIP are not translated fully in Kyrgyz and are no longer legal acts.

The construction standards followed by most companies in Kyrgyzstan are the GOST standards. These standards are abided by 78 percent of all construction companies. SNIIP standards are followed by 64 percent of all companies. Compliance of the other technical standards is lower, with 36 percent, 33 percent and 31 percent of companies following KNS, EH and ISO 9000, respectively. Five percent of all firms do not follow any construction standards protocol.

The emerging slow-down for new residential and commercial construction is noted by the decline of applications for new residential and commercial land sales. The decline in sales of existing housing and residential stock has also declined, which will affect the after-sales and secondary markets for construction materials.

The market forecast is mixed. In the short term, demand for the construction industry will decline dramatically. In the medium-term (2017), an optimistic scenario indicates limited growth but this will be dependent on worker remittances returning to 2014 levels. In the long term (after 2017), an optimistic scenario would envision demand for housing increasing.

The Eurasian Customs Union was formed in 2010. The founding members were Belarus, Kazakhstan, and Russia. The Customs Union expanded in 2015 to include Armenia and Kyrgyzstan.

Industry representatives expressed two concerns associated with the Customs Union. First, there is a lack of information and understanding about the implementation and enforcement of the trade rules. Second, the impact of the new trade regime on business is unknown.

In the short-term, the impact of the Customs Union on the construction industry may be minimal depending on the time it will take to implement the rules governing taxation, tariffs and standards. The medium and long-term scenarios are mixed. In the medium-term (2016 to 2017), Russian and Kazakhstan imports will increase. An optimistic situation could emerge in the long term should Kyrgyz companies improve productivity and quality and if the planning and application reform is introduced. A negative scenario is also possible if local companies remain unproductive and the planning process cumbersome.

The following challenges emerge from this study: (i) the lack of coordination and understanding of the proposed technical standards prescribed by the Eurasian Customs Union; (ii) manufacturers and raw material producers provide low quality products and cannot meet other operational performance criteria; (iii) the Government planning and application process is ineffective and inefficient; and (iv) limited availability of business development programs and business collaborations has deterred business advancement and new market development.

Three coordinated programs are proposed: (i) upgrading the quality and safety of construction materials by introducing and enforcing higher national technical standards; (ii) establishing a more effective and efficient planning and application process; and (iii) establishing business programs to improve construction materials contracting and manufacturing.

For Program 1, a public-private partnership could be introduced to facilitate the modernization of the outdated SNiP practices and regulations for construction of residential and commercial buildings to meet impending Customs Union regulations (i.e. up to date SNiP). This will include the translation of the new SNiPs into Kyrgyz. In partnership with SAACHCS, IBC and JIA, this public-private partnership could spearhead the steps required to establish the process and timeline necessary to achieve modernization objectives in Kyrgyzstan.

Additionally, the new Customs Union construction standards could be the stimulus for manufacturing upgrades, as technical standards will be embedded and enforced by law. To meet the new construction standards, developers and manufactures will require support in understanding the new standards and how these standards will affect their business in terms of training and investment in new processing technologies and in new product materials and design. A technology business service agency should be established with the objective to create products that meet the new construction standards.

Regarding Program 2, the Ministry of Economics could be encouraged to take up the “One Stop Window” for construction permitting from the Ministry and the Bishkek Architectural Authority. Currently, planning for private sector construction projects in Bishkek and the surrounding area is chaotic and unregulated. One possible outcome of an improved planning process would be the establishment of a formal urban planning platform for the City of Bishkek.

For Program 3, businesses could be better supported across the value chain. Business development services could improve productivity, introduce new building designs and introduce new materials and technologies. Service provision could be In order to bring about a concerted effort, business associations and trade affiliations require assistance to establish and formalize organizational structures.

BACKGROUND

The aim of the Kyrgyzstan Business Growth Initiative (BGI) Project, Kyrgyzstan Construction Materials Value Chain and Stakeholder Analysis is to conduct a comprehensive analysis of the construction materials value chain and to acquire current and comprehensive information about the value chain and its stakeholders for the purposes of informing BGI about the state of the industry.

The information found in this report was collected during two visits to Bishkek and Osh, Kyrgyz Republic. The first visit took place from March 24 to April 22, 2015, and the second mission took place from May 18 to June 6, 2015.

This study uses a value chain framework to conduct the investigation. The research methods used to gather the information included open-ended questions and semi-structured questions for key informants and focus groups. Quantitative and qualitative data were collected. Moreover,

six workshops were held to formulate the market forecasts and to draw-out the possible outcomes that could arise from the advent of the Customs Union.

The recommendations evolved from discussions between IBC and JIA partners. During the workshops concepts and frameworks were developed to reflect the interests and priorities of industry and Government.

1 METHODOLOGY

SSG Advisors approached the construction materials value chain research through mixed qualitative and quantitative methods for data collection under the umbrella of a value chain framework presented in the interim report. The local project partner, IBC, conducted a thorough desk research analysis of historical trends and current advances and constraints to the Kyrgyz construction sector, including economic analyses of import/export capacities, domestic and foreign constraints to market development, and regulations and norms governing construction safety, certification, and education. Furthermore, IBC, through its partnership with JIA, leveraged government and industrial data sources to construct a comprehensive database of private sector agents in the construction industry in Kyrgyzstan to serve as the best estimable population from which to draw a sample for the quantitative survey.

Based upon the desk research, the stakeholder database, and JIA's membership database, the SSG team designed open-ended and semi-structured interview protocols to conduct preliminary qualitative data collection across several dimensions of the construction materials value chain, from the producers of raw materials through to construction companies, which, for the intents and purposes of this research, represent the end-user market of raw, manufactured, and fabricated construction materials. As a result of the 45 qualitative, semi-structured, and open-ended interviews, the SSG team was able to construct a quantitative survey instrument targeted at a sample of over 160 construction materials value chain agents. The results of both the quantitative and qualitative data collection serve as the source material for the recommendations presented in this report. The section below details the methods implemented across the value chain.

Desk Research

Beginning in February 2015, IBC and its partner organization JIA conducted a thorough desk review of historical and contemporary regulations, trends, and data on the construction materials value chain per their TOR. Desk research included the review of government websites and documents concerning the construction industry; a thorough legal review of the state of health, safety, and environmental standards; and best estimate data on volume and costs of construction materials imports and exports. Over the course of the desk review, IBC/JIA noted a consistent lack of coherent information across government statistical bureaus and other agencies, which the desk review attempted to present in the most coherent vision possible. The submission of the desk research was delayed due to a change in IBC staff, but a draft was provided to BGI in mid-April for review. IBC submitted a final draft of the desk research to BGI in early June 2015.

Stakeholder Database

In addition to desk research, prior to the SSG team's first mission, the IBC/JIA partnership had employed a number of government and industrial data sources to construct a preliminary stakeholder database populated with 680 construction-related private sector companies.

Recognizing the transitory nature of businesses within Kyrgyzstan, as well as the questionable reliability of government statistics, the IBC/JIA consortium employed a team of interns and consultants to conduct telephone verification of each of the 680 database entries. The verification process resulted in a database of 301 private sector agencies participating in the construction value chain including a breakdown by raw material providers, manufacturers, service agents, retail agencies, and construction companies. This verified database served as the population from which to sample for the quantitative survey (see below).

Open-ended and Semi-structured Interviews

Upon arrival of the SSG team in mid/end March, the SSG/IBC/JIA partnership conducted a preliminary review of the database to identify a sample for the 50 qualitative interviews mandated by the SSG TOR. Due to the preliminary and questionable nature of the database at that time, the SSG team chose to rely on the IBC and JIA network as the key informant pool for the qualitative interviews. Both IBC and JIA, given their activity in the construction industry and extensive memberships, provided a comprehensive structure on the construction industry that allowed the SSG team to construct a top-down/bottom-up process of over 40 interviews over the course of the three-week mission.

The SSG/IBC/JIA team constructed a qualitative interview sample that began with the end-users of construction materials (construction companies) and worked its way back down the value chain of suppliers through manufacturers, fabricators, and raw material providers. Each interviewee was asked to provide a list of suppliers and value chain agents, on which the SSG team and IBC support personnel followed up.

Over the course of three weeks, the SSG team, with IBC/JIA support, conducted over 40 in-depth interviews, including several visits to local retailers in open-air markets, to assess construction value chain transaction points. The preliminary analysis of this qualitative data served as the basis for both the preliminary recommendations provided in the interim report and the design of the quantitative survey instrument employed by IBC/JIA and its subcontractors.

Focus Groups

Per the TOR, the SSG team conducted four of the five mandated focus groups over the course of the first mission, with the final focus group conducted during the second mission. With guidance and training from SSG specialists, from May – June 2015, the BGI/JIA team conducted four focus groups in Osh that targeted labor market need, educational standards, and student-assessed education quality. The focus groups centered on the government, regulatory, and policy environments supporting the construction sector in Kyrgyzstan. IBC, with its comprehensive connections to government, educational, and private sector agencies, was successfully tasked with identifying and convening participants for the four focus groups to date. Three focus groups (safety and certification, planning and procurement, and workforce planning) were conducted in Bishkek and an additional focus group was conducted in the southern city of Osh, which targeted a combination of safety and government policy/planning actors. The focus group in Osh provided more limited data due to the challenging composition of participants. The focus groups consisted of, on average, six to nine participants and were guided by forward-looking protocols aimed at soliciting opinions and prognoses that would contribute to constructive recommendations for future BGI interventions.

Quantitative Survey Instrument

Initial analysis of the qualitative interviews and focus groups served as source data for the construction of a quantitative survey instrument. The five-page instrument includes data solicitation on manufacturers, suppliers, and construction companies covering a range of issues,

such as current trends in sales/production, workforce planning, and costing. The team of IBC/JIA employed a professional survey company to conduct the questionnaire from April 22 – June 2. The SSG team conducted a thorough training of IBC/JIA/personnel on survey procedures/protocols with oversight during the first few pilot interviews. IBC staff conducted spot checks on the quality and consistency of data collection during the SSG Advisors team’s absence and coordinated during weekly conference calls.

In collaboration with IBC/JIA, the SSG team prioritized sampling from the stakeholder database to focus primarily upon construction materials manufacturers/fabricators and raw material providers, with a secondary emphasis on retailers and service agencies. This sampling allows for a more comprehensive review of the middle levels of the value chain, which will then draw inferences and verification from the value chain’s higher and lower ends. Overall, the quantitative survey managed to capture over 160 respondents across all strata with in-person, telephone and a few e-mail surveys. With training from SSG, BGI staff conducted telephone verification of conducted interviews as well as conducted random data validity verifications to assure the quality of data entry.

Table 1 below presents a breakdown of the number and activity strata of survey respondents.

TABLE 1. BREAKDOWN OF CONSTRUCTION VALUE CHAIN SURVEY RESPONDENTS BY ACTIVITY

Activity Strata	No. of Respondents*
Raw Material Providers	26
Manufacturers	76
Sales and Distribution	111
Service Providers	32
Contractors	99

*Number of respondents by strata exceeds 160 as many respondents engage in more than one activity

Workshops

During SSG’s second mission from May 19 – June 5, the SSG/BGI team conducted a series of 5 problem solving workshops with a variety of stakeholders to assess the veracity of the data collected from the stakeholder interviews, focus groups and survey instrument. Workshops employed the Ishikawa diagram method for identifying the root causes of identified challenges in the construction materials value chain, which then worked back to recommendations for their home-grown and realistic for their solutions by stakeholders themselves. Like the focus groups, workshops included a variety of participants include sales and distributors, government representatives, manufacturers, contractors and services providers. Four of the workshops were held at the BGI office in Bishkek and one, conducted by BGI staff, was conducted in the JIA office in Osh.

2 PROFILE OF THE CONSTRUCTION MATERIALS VALUE CHAIN

The *value chain* describes the range of activities that are required to produce a product or service and deliver it to users and consumers. There are different stages of the production process, including: (i) the supply of raw materials, parts, components, and inbound logistics; (ii) operations entailing the transformation of inputs into outputs (production); (iii) marketing, sales, and distribution; and (iv) support services, such as planning, human resource management, information technology, and procurement. For service provision, the production and the delivery of services are often closely associated. Customer experience is also an important value-adding characteristic.

The importance of separating out different activities and functions is to draw attention to direct operational activities and support activities. Value chains also include upstream linkages with different tiers of suppliers and downstream linkages with distribution agents, and customers. Value chains can be simple or complex depictions of commercial and support activities, and also feed into a number of other different value chains.

A value chain analysis can reveal gaps in business performance in terms of operations, logistics, and communications. These gaps can point to possible improvement and innovation at the business level. Identifying possible areas for improvement can direct initiatives for:

- Technology and managerial practices to support new production processes;
- New product development; and
- New services

Other business activities, which can take on an innovative approach, are new marketing strategies, including packaging and brand name development.

Finally, value chain activities should be seen as part of the wider economic environment. The linkages supporting organizational transactions rely on physical infrastructure such as roads, bridges, and other transport facilities, as well as utilities such as power and information and communication technologies. The wider economic environment also includes the facilities that educate and train skilled and semi-skilled workers. Value chains also operate in a business environment that define and enforce the formal and informal rules and regulations of doing business. This environment can enable or constrain value chain and business development.

2.1 THE KYRGYZ CONSTRUCTION VALUE CHAIN

The Kyrgyz construction sector consists of four sets of activities:

- i. Raw materials and materials processing;
- ii. Manufacturing of construction materials;
- iii. Construction and contracting services including building developers and
- iv. Services pertaining to distribution and retail.

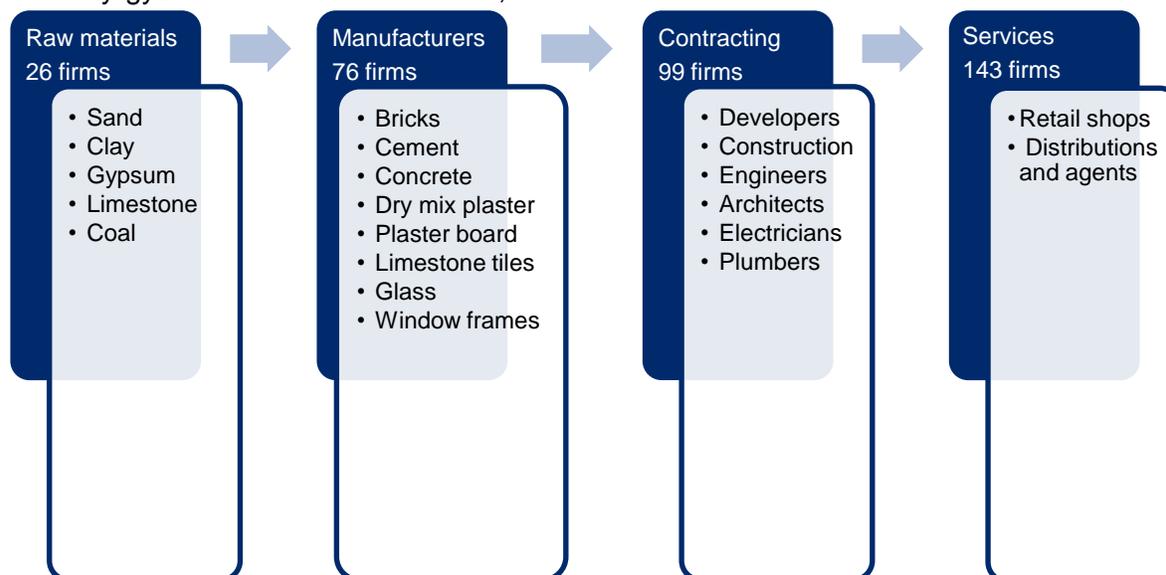
Construction designs set the technical specification as per the type of building materials used by developers and contractors. Current new builds make use of mid twentieth century (Soviet) designs. The introductions of new designs are hampered by outdated building codes and regulations that govern the industry (see section 3.2). The main building materials used in

Bishkek are elementary clay bricks and basic reinforced concrete slabs using steel reinforcing bars (re-bars). In Kyrgyzstan, local production of basic raw materials includes the following:

- Sand, clay, and coal used for bricks;
- Gypsum for cement, dry mix plaster, and plaster board;
- Limestone (calcium carbonate) used in Portland cement (and concrete); and
- Limestone for sand tiles.

Local manufacturing includes glass and window frames, paint, and basic plastic piping. However, the material inputs for these products are imported. Construction and contracting services are locally based, as are the key distribution, wholesale, and retail buyer markets. The IBC database identified 344 companies undertaking activities related to the construction value chain.

Figure 1. Kyrgyz Construction value chain, local activities



Source: Interviews and IBC database

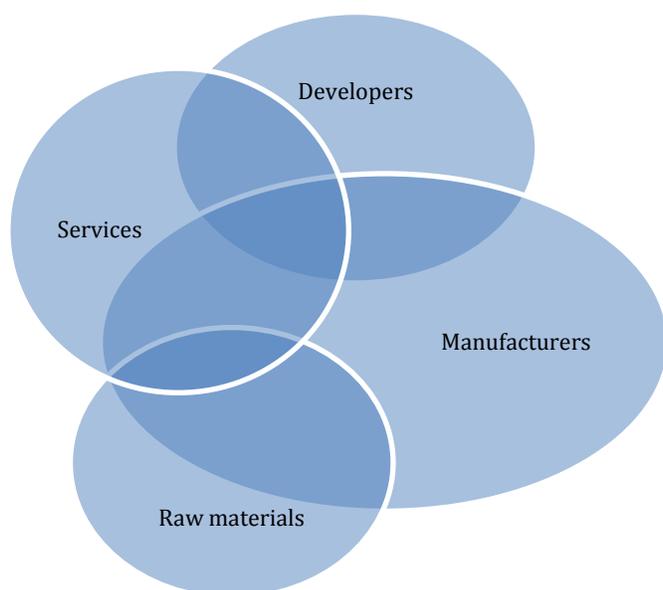
Developers (under “Contracting” in Figure 1) are the gatekeepers in the construction value chain. As the risk takers in the process, developers manage the application processes and organize the financing. Most developers also manage the construction projects. Developers will sub-contract to specialist contracting services such as architectural, engineering, plumbing and electrical, although some developers do provide in-house contracting services. Construction contracting services are usually sub-contracted to local companies that organize labor “brigades.” Unlike the USA or in the European Union, Kyrgyz construction workers are paid per the completion of the project, i.e. piecework. This outdated payment system is known to contribute to poor workmanship as workers focus on completion time and costs rather than quality.

The main construction contracting activities are brick masonry, concrete mixing, forming wall foundations, and internal installation of basic windows, elevators, and utilities. Contractors will

purchase directly from local producers, although developers often dictate the use of particular suppliers. Suppliers have to meet typical performance criteria (quality and price primarily) although informal networks are also important factors for supplier selection. Formal tendering for small and mid-size building projects is not common.

The key middlemen in the construction building process are steel distributors. Distributors import steel from Russia and Kazakhstan, and to a lesser extent, China.

FIGURE 2. OWNERSHIP OVERLAP OF CONSTRUCTION RELATED COMPANIES



Companies in the Kyrgyz construction value chain overlap. Businesses own, or are affiliated with, different activities across the value chain. Of the 55 developers that responded to SSG/ IBC survey, 11 percent indicated that they own manufacturing companies and 15 percent provide additional construction-related services. However, developers do not engage in raw material production. In addition, 37 percent of manufacturers also provide services while 32 percent of service providers manufacture to some extent.

2.2 EMPLOYMENT

In 2013, 244.9 thousand people were involved in the Kyrgyz construction sector, which is 11 percent of the total

workforce. However, according to the National Statistic Committee 35 percent of these workers are working abroad (Source: IBC Desk Review).

The IBC database collates information on over 300 companies. According to the IBC database, 20,534 workers are employed across the construction value chain in 2015 (Source: IBC database)¹. This includes 10,342 permanent workers and 10,192 non-permanent workers. Verification efforts by the IBC confirm the accuracy of these numbers, which can be traced directly to businesses.

Drawing on the IBC database employment data, the sectors consists primarily of micro and small size business. 40 percent of the companies are micro size firms (between one and nine employees) while small firms (between 10 and 49 employees) constitute 44 percent of all firms by size.

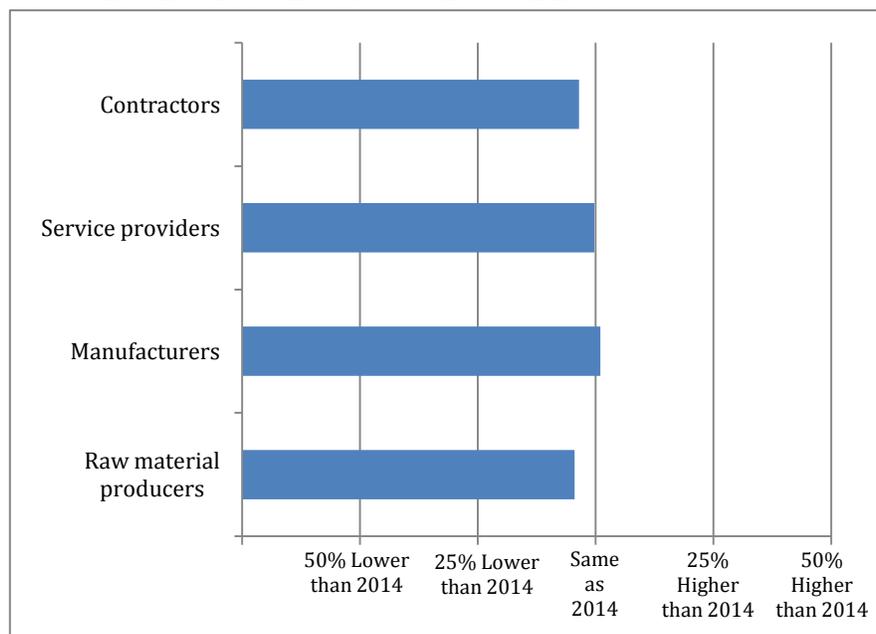
¹ The IBC database shows the number of permanent employees and part-time employees for 184 and 180, respectively, of the 344 listed companies. The employment data reported above are extrapolated from this base by a factor of 1.87 for permanent employees and 1.91 for part-time employees.

TABLE 2. NUMBER OF FIRMS IN THE KYRGYZ CONSTRUCTION VALUE CHAIN, BY EMPLOYEE SIZE BAND

Employee size band	Number of firms	Percentage
1 to 9	138	40%
10 to 49	151	44%
50 to 249	47	14%
250 and greater	7	2%

Source: Extrapolated from the IBC database

FIGURE 3. EMPLOYMENT CHANGE SINCE 2014



Despite demand decreasing, construction companies, on average, have not laid off staff to any great extent. While, contractors and raw material producers have reduced employee numbers, most companies interviewed indicated that they have retained their skilled workers. This trend to retain skilled workers during the start of an economic downturn also occurred in the UK in 2000-10

Source: SSG/ IBC Survey

2.3 COMPETITION

Competition is mostly local with some regional rivals competing with larger companies. Over 73 percent of manufacturers, and 76 percent of developers/contractors, noted that their primary competition came from local firms. Fewer than 20 percent of raw material producers compete with Kazak and Turkish rivals for while less than 5 percent of manufacturers face competition from Kazak firms. Chinese firms were the leading competitors for 6 percent of developers/contractors.

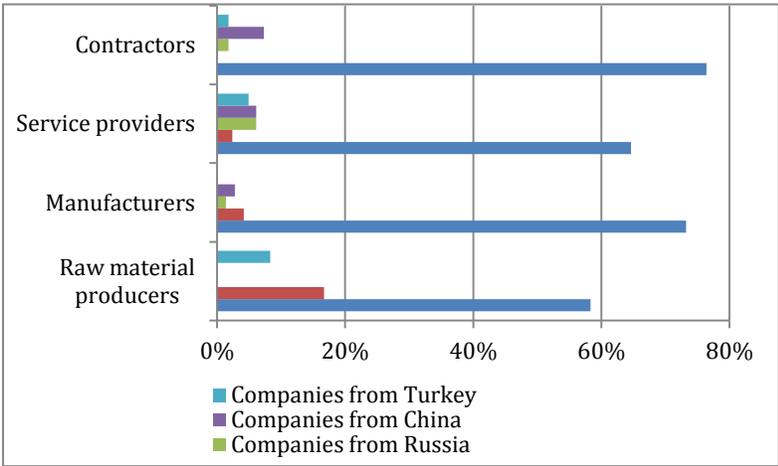


FIGURE 4. LOCATION OF MAIN RIVALS²

Source: SSG/ IBC Survey

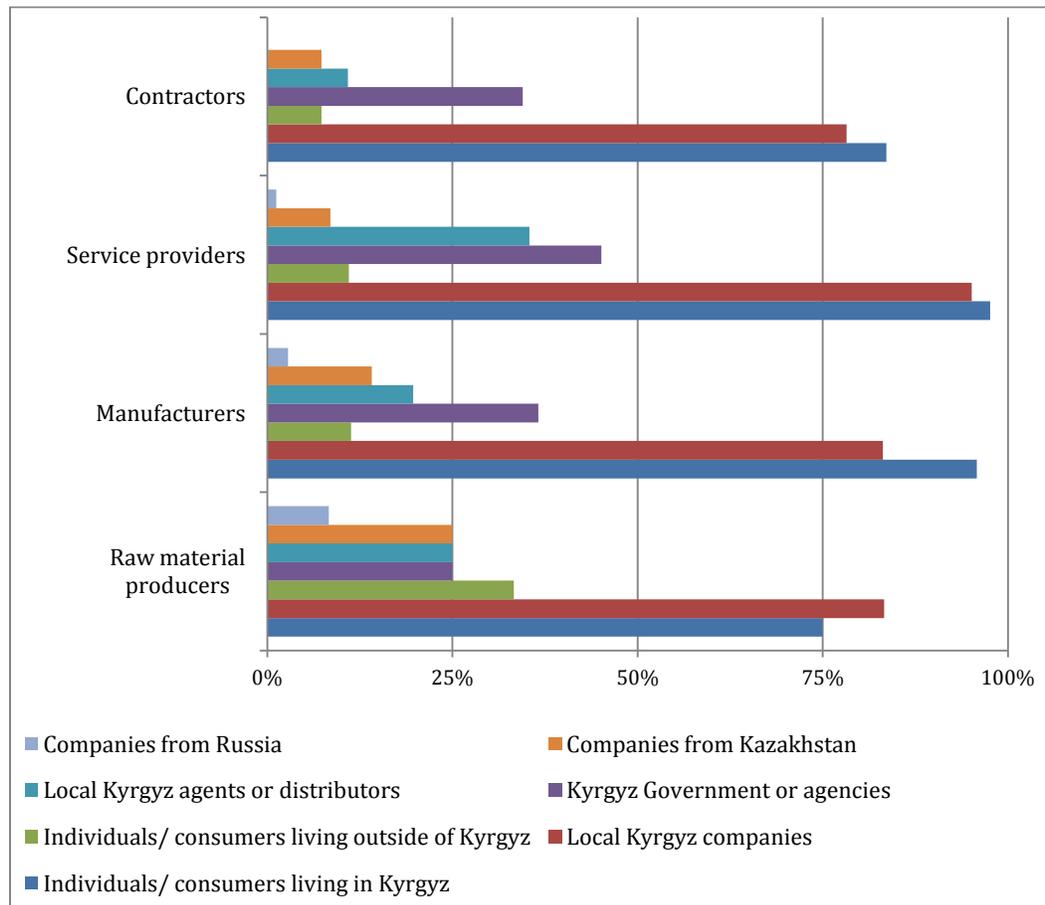
2.4 MARKETS

The construction industry primarily serves the local Kyrgyz economy. Over 75 percent and 83 percent of raw material producers sell to individual Kyrgyz consumers and local businesses, respectively. Over 95 percent of manufactures sell to individual Kyrgyz consumers, while service companies are very dependent on the local market, with more than 95 percent of local service companies providing services to both local business and consumers. Local and the national government are also important procurers of locally made products and services with 39 percent of the construction industry selling to government.

Kazakhstan remains the most important export market for the local construction industry: 14 percent of the number of manufacturers and a 25 percent of the numbers of raw material producers sell to Kazak companies. Uzbekistan is an important market for 17 percent of raw material producers, 5 percent of manufacturers and 6 percent of service providers. Only 8 percent of raw material producers and three percent of manufactures sell in the Russian market.

² Data does not include unregistered local Kyrgyz companies.

FIGURE 5. LOCATION AND TYPE OF BUYERS OF LOCAL CONSTRUCTION PRODUCTS AND SERVICES

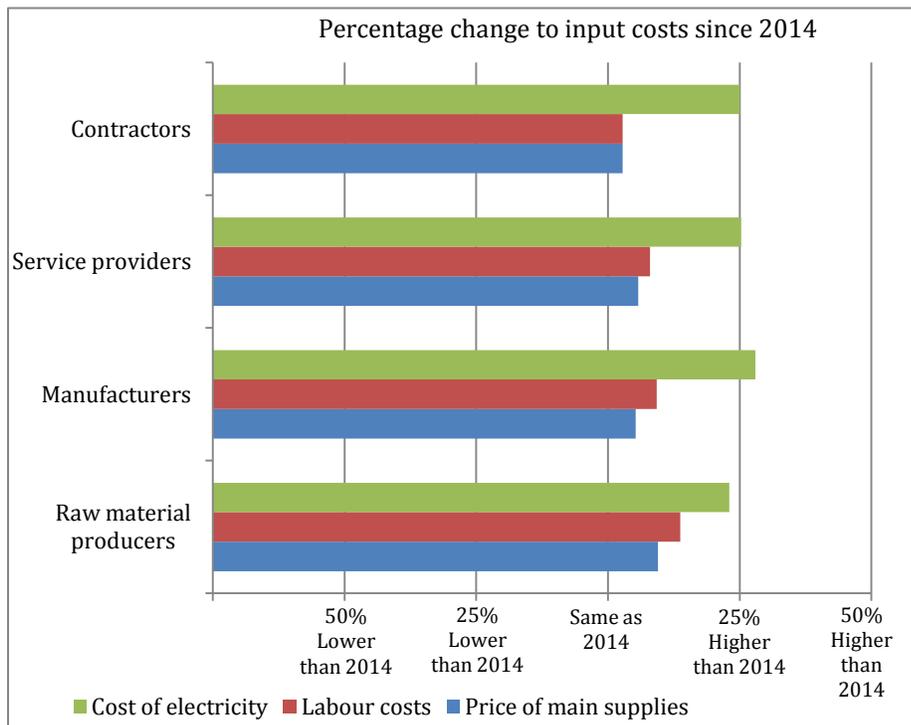


Source: SSG/ IBC Survey

2.5 RECENT PERFORMANCE

Business performance in the first quarter (Q1) of 2015 has been mixed. Businesses have experienced cost increases for some inputs, particularly electricity. Demand has fallen in Q1 2015 compared to Q1 2014. Orders have dropped from the previous year with developers not planning many new builds. Furthermore, the number of buyers has declined significantly for most businesses during this same period.

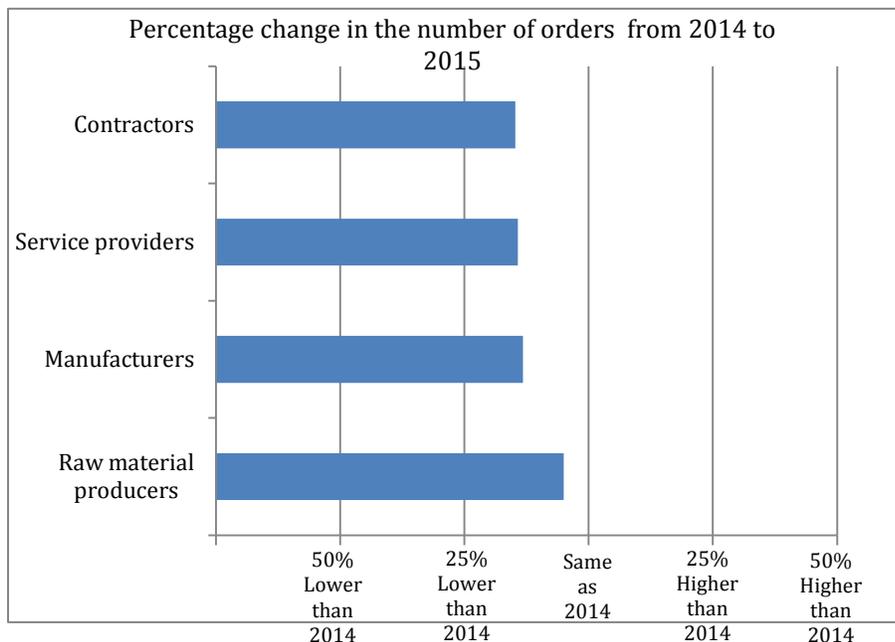
FIGURE 6. INPUT COST INCREASE FOR CONSTRUCTION COMPANIES



Input costs have increased for most companies in 2015. The cost of electricity has increased by over 25 percent across the value chain since 2014. Labor costs and supplier costs have also increased.

Source: SSG/ IBC Survey

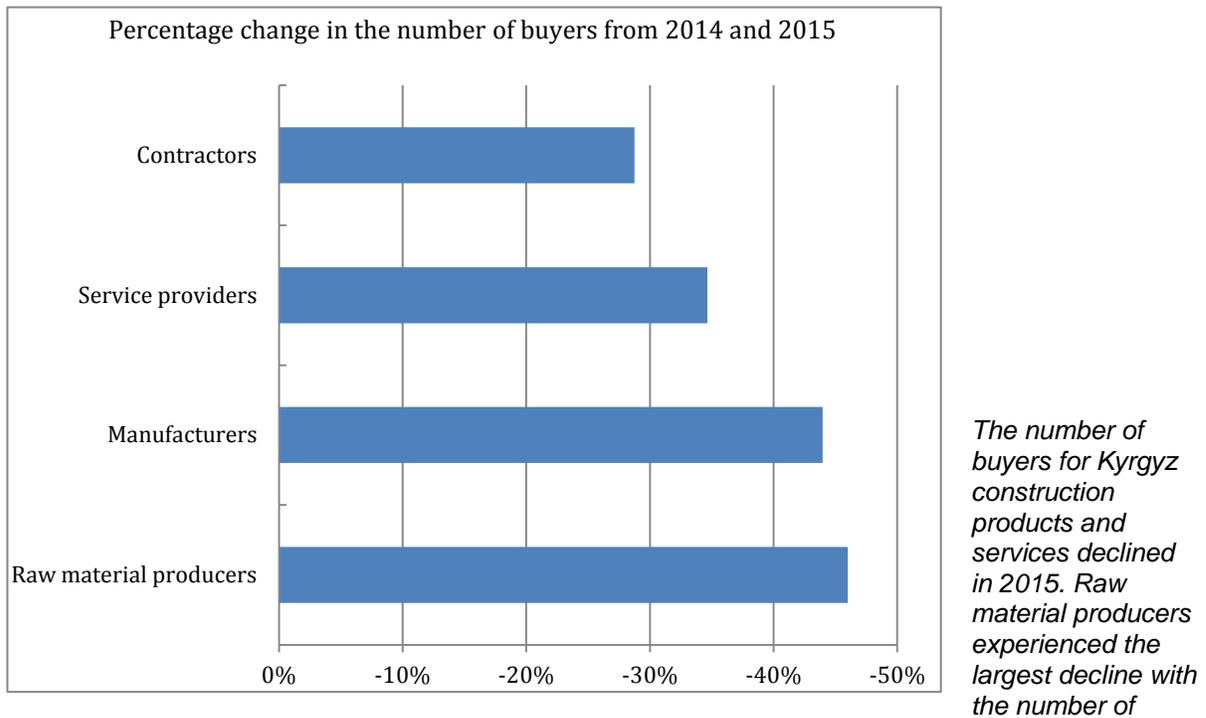
FIGURE 7. DECLINE IN ORDERS FOR CONSTRUCTION PRODUCTS AND SERVICES



Orders have fallen for most construction companies in 2015 Q1 compared to the orders placed in 2014 Q1. Developers and contractors have experienced the biggest change with an almost 25 percent fall in orders from buyers. This decline could have a ripple effect across the entire value chain as developers have curbed new build applications.

Source: SSG/ IBC Survey

FIGURE 8. DECLINE IN NUMBER OF BUYERS FOR CONSTRUCTION COMPANIES



Source: SSG/ IBC Survey

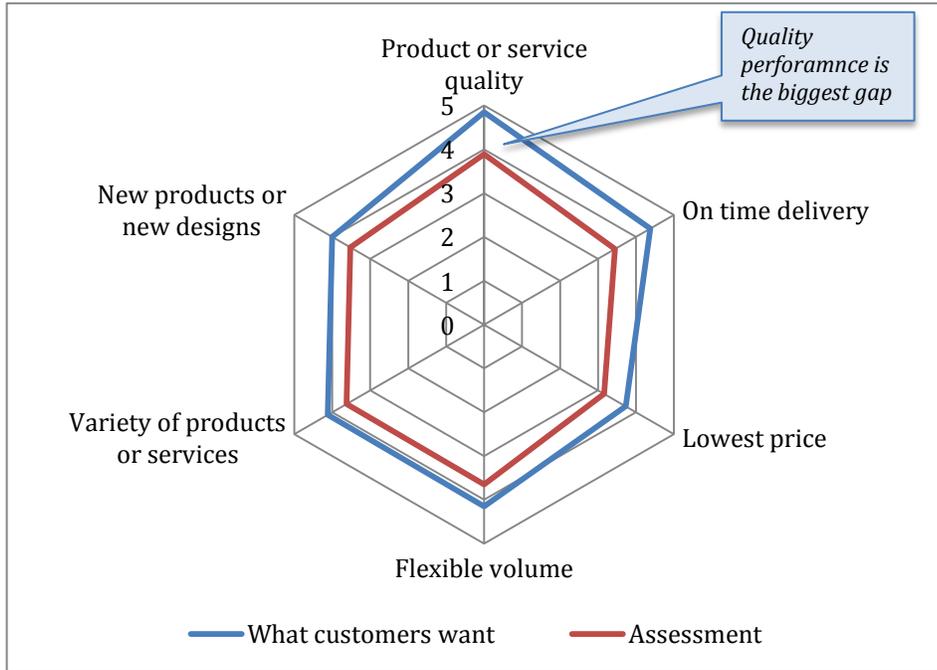
2.6 PURCHASING CRITERIA AND ASSESSED PERFORMANCE

A self-assessment diagnostics exercise was applied to evaluate the performance of manufacturers and raw material producers. The use of an 'importance-performance' assessment is used to evaluate performance in reference to customer priorities. The technique identifies business performance gaps.

Businesses were asked to identify the buyers' criteria when purchasing products and services. The customer's criteria included operational and innovation factors such as product or service quality, on-time delivery, flexible volume, the variety of products or services, new products, designs, and services, and lowest price. The various criterions were ranked according to the following scale: 5 =very important; 4= important; 3 = neither important nor unimportant; 2 = not so important; and 1=unimportant.

Businesses were also asked to evaluate their operational performance to meet these customer priorities. Performance was ranked using the following scale: 5=better than international competitors; 4=better than local competitors; 3=same as competitors; 2= not as good as local competitors; and 1= under performing and in trouble.

FIGURE 9. IMPORTANCE AND PERFORMANCE ASSESSMENT – MANUFACTURERS

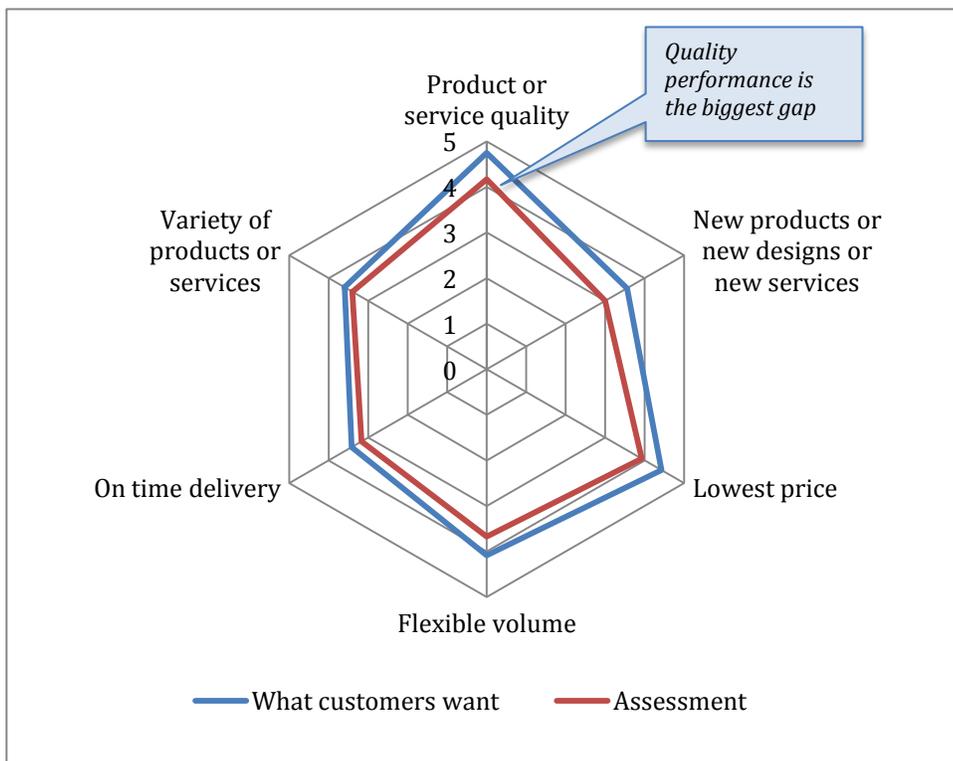


The most important customer purchasing criterion identified by manufacturers is quality, followed by flexible volume and product variety. However, the largest performance gap for manufacturers is product quality, followed by on-time delivery.

Customers do not seek the lowest price for products and the performance gap is not a priority.

Source: SSG/ IBC Surv

FIGURE 10. IMPORTANCE-PERFORMANCE ASSESSMENT - RAW MATERIAL PRODUCERS



Similar to manufacturers, raw material producers indicated that quality products are the most important customer-purchasing criterion while being offered the lowest price is the second most important criterion. Critically, raw material producers are neither meeting customers' quality specifications (i.e. products that can meet technical specifications) nor are they meeting customers' lowest price expectations.

Source: SSG/ IBC Survey

3 THE PLANNING PROCESS AND CONSTRUCTION STANDARDS

The government sets and enforces requirements for the planning and application process of new construction projects. Technical standards for construction also come under the government jurisdiction. Both the planning process and the implementation of construction standards are out of date and ineffective.

3.1 PLANNING AND APPLICATIONS

Construction material safety and quality standards are nominally overseen by the State Agency for Architecture, Construction, Housing and Communal Services (SAACHCS) and known as Gosstroj. A significant limitation to the coordination of quality inspections and permit provision is the lack of coherent government planning on construction and zoning.

Error! Reference source not found. illustrates the planning and application process developers follow for the construction of new buildings. The process consists of 12 stages and requires over 20 documents to be signed off by different Government Ministries and Agencies. Several companies indicated that this ineffective and antiquated system can add eight to twelve months to the planning and application process (Source: Interviews).

TABLE 3. PROCEDURE AND LIST OF CONSTRUCTION PERMISSION DOCUMENTS

<i>Stage</i>	<i>Documents</i>	<i>Registration body</i>
1	Topographical survey, engineering geological conclusion.	JSC "Kyrgyz GIIZ"
2	Seismic conclusion	Institute of Seismology
3	Preliminary design	Company
4	Town planning council	Bishkek Glav Architecture
5 (technical conditions)	Architecture planning conditions APC/ Engineering technical conditions ETC	Bishkek Glav Architecture
	Electricity supply system section	Severelectro, NESK
	Water supply and sewage system	Gorvodokanal
	Heating system	Bishkekteploset

Stage	Documents	Registration body
	Gas supply system	Bishkekgas
6 (external system)	External water supply and sewage system section	(no formal registration)
	External electricity supply system section	(no formal registration)
	External heating system section	(no formal registration)
	External gas supply system section	(no formal registration)
7 (contractor design)	General plan section	Company
	Architecture construction section	Company
	Constructive construction section	Company
	Heating and ventilation section	Company
	Water supply and sewage section	Company
	Electricity supply section	Company
	Technical features section	Company
	Security fire alarm section	Company
8	Preliminarily approval	Bishkek Glav Architecture
9	Approval	Bishkek Glav Architecture
10	Expertise	Gosstroy
11	Technical inspection	Gossecotechinspection
12	Field supervision	Company

Source: IBC Desk Review

3.2 CONSTRUCTION STANDARDS

The following standards are used to meet product and service standards and certification. There are specific codes that define quality, health and safety and environmental practices and standards for the construction industry:

- i. GOST National Standards (ГОСТ – Государственный стандарт) – standards and technical specifications cover energy, oil and gas, environmental protection, construction, transportation, telecommunications, mining, food processing, and other industries;
- ii. SNiP Building Code (СНИП – Строительные нормы и правила)– cover the Construction Norms and Rules;
- iii. EH – EN – European Standards (Европейский стандарт) – are an adoption of European construction standards;
- iv. KNS – КГС (Классификатор государственных стандартов)– Classifier of State Standards and

- v. ISO 9000/ 9001, which can include GOST ISO 9001 (the Russian/ Eurasian adaption of ISO 9000/9001). – international quality management standards for manufacturing and services.

GOST are a set of technical standards that cover energy, oil and gas, environmental protection, construction, transportation, telecommunications, mining, food processing, and other industries. Quality and safety standards fall within the GOST codes. Within the GOST standards are building codes and regulations (SNiP).

Mandatory quality and safety standards are governed on the basis of the approved regulations. The Kyrgyz Republic has adopted the GOST (State Standard) standards and has periodically updated and harmonized international quality and safety standards. Some of the harmonized safety and quality standards are in the implementation status.

Mandatory certificate of conformity requires certification, which is issued by public authorities for the products or services to confirm compliance with statutory legislation and standards. Basic rules and requirements for products are registered follow the GOST standards and modified GOST ISO (it is also known as the certificate of quality or GOST certificate). The absence of a certificate will lead to a ban on the importation and distribution of the products or services.

The certification of construction materials and on-site verification is housed under the Republican Center for Certification of Construction. The material certification standard for the industry is the Construction Norms and Regulations (SNiP), which is a holdover from the Soviet Union. SNiP has not been updated to include contemporary international construction material standards.

Currently (July 2015), the status of the construction norms and rules (SNiP) is unclear. Article 18, of the Law of KR 'On the Basis of Technical Regulations', notes that the SNiPs have recommendation status only and are not a legal act. Furthermore, as per Article 36 of the Law of KR, 'On Normative Legal Acts of the Kyrgyz Republic', dated 20th July, 2009, No.241 (further – Law on NLA), the SNiPs are no longer binding in law. For example, the prosecutors' office will not uphold SNiP regulations (Source: IBC Desk Review and follow-up interviews).

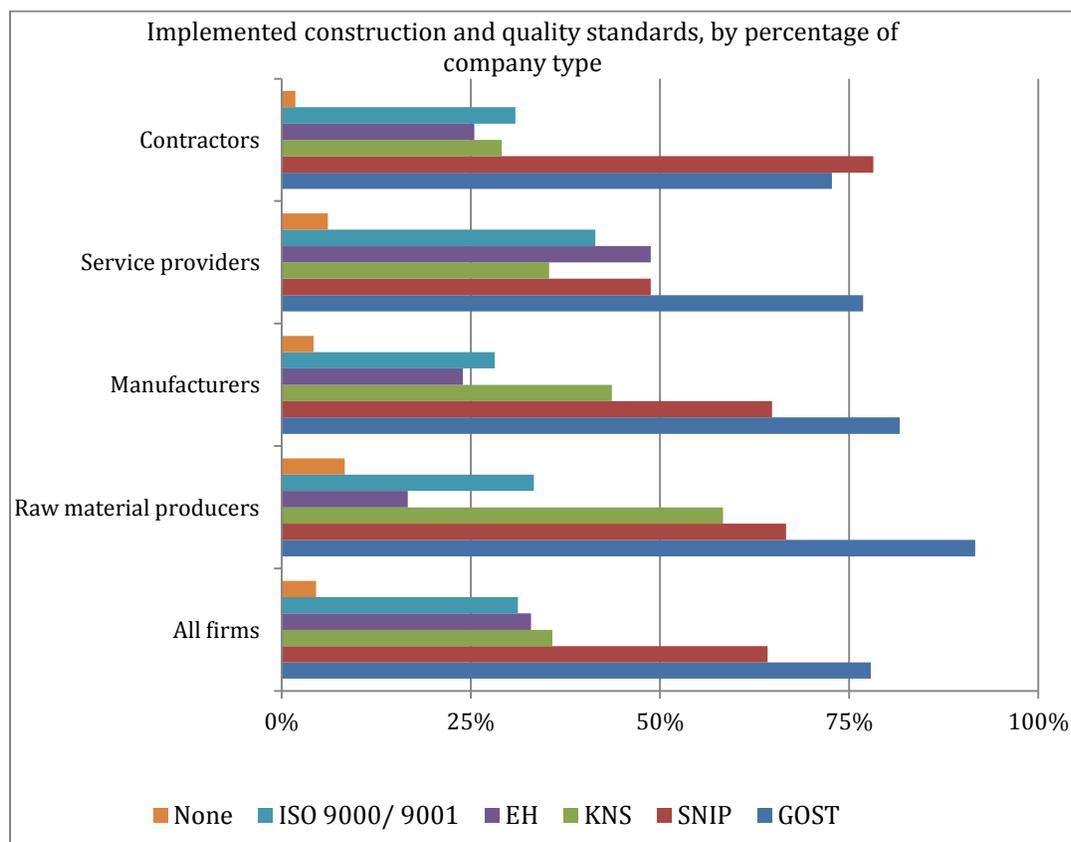
One reason for the ambiguity of the enforcement of SNiP is the inability of the Government to translate the codes and standards into Kyrgyz. As per item 1-1 of Article 26, of the Law on NLA, all normative legal acts must be adopted in both the state and official languages. It is difficult to enforce the SNiPs by a Government Decree, since the country does not have the expertise or funding to translate the SNiPs into Kyrgyz.

Due to the uncertainty with the SNiPs, various contradictions have been noted. For example, the Land Code of KR determines that all the works on a land parcel must be conducted in accordance with the Design of Detailed Planning (DDP). As per the SNiP No. 30-02-200, 'Content, Procedures for Elaboration and Approval of The Urban Development/Construction Documents' (which was approved by an order of the State Agency on architecture and construction under the Government of the KR dated 25th September, 2007, No. 209), in the situation where DDP is not available at any given area, the Bishkek Department for Architecture is allowed to elaborate design (sketch) the construction plot. However, the prosecutor's office believes this is illegal due to the above explained reasons.

EH are important standards when construction companies use European products and services. Kyrgyz companies also have to follow EH standards when exporting to the EU. KNS standards are secondary standards used to define products and services.

Findings from the SSG/ IBC Survey show that the construction standards in Kyrgyzstan followed by most companies are the GOST. These standards are abided by 78 percent of all construction companies. SNIIP standards are followed by 64 percent of all companies. Compliance of the other technical standards declines with only 36 percent, 33 percent and 31 percent of companies following KNS, EH and ISO 9000, respectively. Five percent of all firms do not follow any construction standards protocol.

FIGURE 11. CONSTRUCTION STANDARDS IN-USE



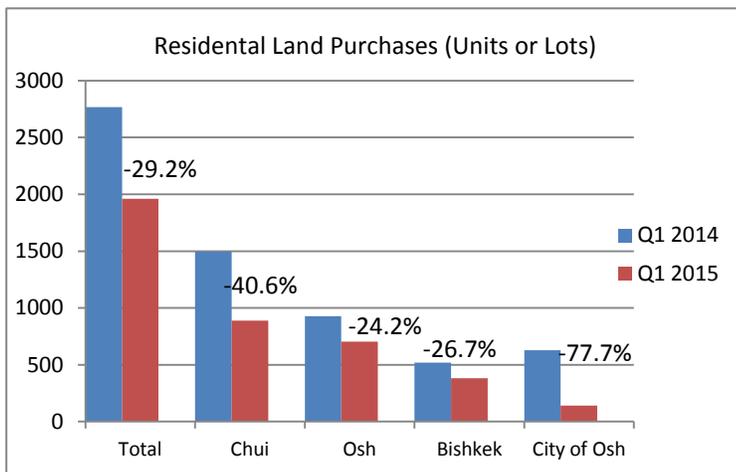
Source: SSG/ IBC Survey

4 MARKET FORECAST

4.1 CURRENT HOUSING MARKET SITUATION AND NEW CONSTRUCTION

The emerging slow-down for new residential and commercial construction is noted by the decline of applications for new residential and commercial land sales. The decline in sales of existing housing and residential stock has also declined, which will affect the after-sales and secondary markets for construction materials.

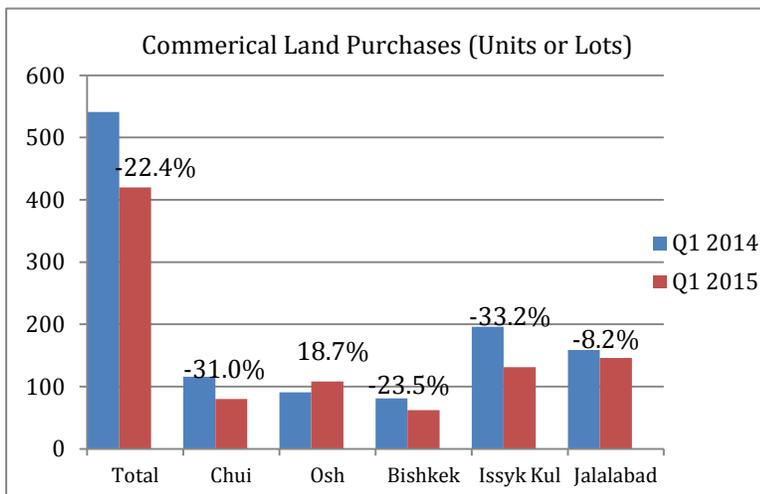
FIGURE 12. PURCHASE OF LAND ZONED FOR NEW HOUSING CONSTRUCTION, 2014 Q1 AND 2015 Q1



The sale of land zoned for new residential builds declined in the first quarter of 2015 compared to sales in the first quarter of 2014. Residential land sales, by units sold, were 29 percent fewer in 2015 Q1 compared to sales in 2014 Q1. The largest decline was in the City of Osh, where sales were off by 77 percent.

Source: Department of Registration of Property and Land of the Government Registration Service- May 2

FIGURE 13. SALES OF LAND ZONED COMMERCIAL, 2014 Q1 AND 2015 Q1³

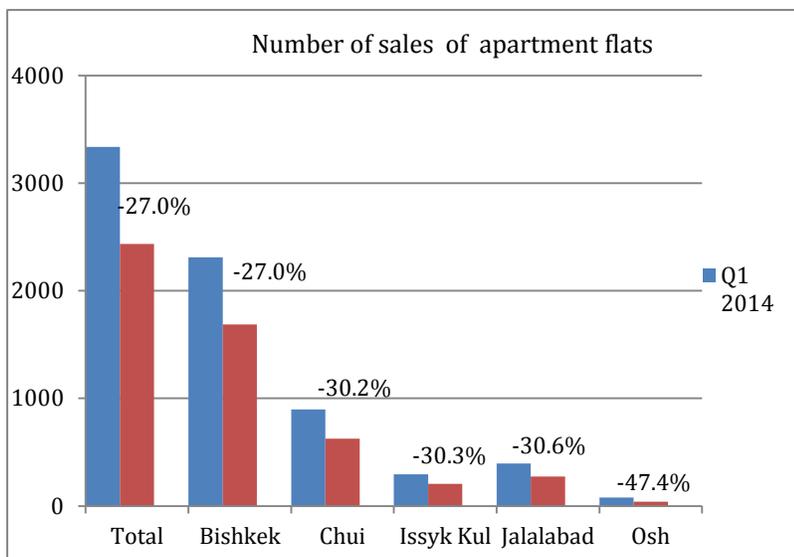


The sale of the number of units of land zoned for commercial purposes also declined. Total sales of commercially zoned land were 22.4 percent less in 2015 Q1 compared to the total number of sales in 2014 Q1. The one exception was in the surrounding district of Osh, which experienced an increase in sales of 18.7 percent. However, commercial land sales in the City of Osh were not included in this figure. Data for the City of Osh was not available.

Source: Department of Registration of Property and Land of the Government Registration Service- May 201

FIGURE 14. SALES OF APARTMENT FLATS, 2014 Q1 AND 2015 Q1

³ Data for the City of Osh was not available.



Total sales of existing apartments (individual apartment flats) were 27 percent lower in 2015 Q1 compared to sales in 2014 Q1. Sales of the number of individual apartment flats in 2015 Q1 were 2,434 units compared to 3,336 in 2014 Q1. This decline in sales will have a negative impact on the demand for after-sales construction materials and service. Source: Department of Registration of Property and Land of the Government Registration Service- May 2015

4.2 GOVERNMENT MARKET FORECASTS

Economic indicators show that the economy is slowing down and will remain sluggish for the rest of 2015. According to Head Economist at the Ministry of Economics, in 2015 Q1: the agriculture sector grew by 7 percent while industry (manufacturing) decreased by 5 percent. Real wages have fallen by 1.7 percent during this period.

The importance of remittance flows

Expatriate Kyrgyz workers living primarily in Russia and Kazakhstan contribute to the Kyrgyz economy by remittance flows. Worker remittances have decreased by 5.1 percent in the 2015 Q1, and income flows are expected to decrease by 10 to 25 percent by the end of 2015. One contributing factor for this decline is the unstable Russian economy. The Russian economy is expected to decrease by 1.5 percent by the end of 2015. A rather optimistic prediction made by the Ministry of Economics suggests that the Russian economy will improve in the latter part of 2016 but this will depend on the geo-political situation in Ukraine and the demand for oil.

Construction material forecast

Export potential for construction materials is limited. The domestic market for construction materials is small and competing on the international market is not realistic due to the competitiveness of neighboring Kazakhstan, Russia and China. Attracting Chinese investment (for example, small-scale plastics fabrication and extrusion) may be viable as Kyrgyzstan could be an initial launching location for larger markets. Kazakhstan may be a more suitable foreign direct investment location as transportation costs are lower and wages only marginally higher compared to Kyrgyzstan.

The cost of materials is expected to increase, particularly prices for imported products such as plumbing and electrical materials from Turkey and China. Price of electricity is also expected to increase by seven to eight percent. The effect of these cost increases would see margins decline.

4.3 SCENARIOS FOR NEW RESIDENTIAL CONSTRUCTION

Demand for new construction builds depends on two external factors: (i) the flow of expatriate Kyrgyz remittances and (ii) unstable currency exchange rates, considering that the Kyrgyz Som is tied to the Russian Ruble (Source: Interviews).

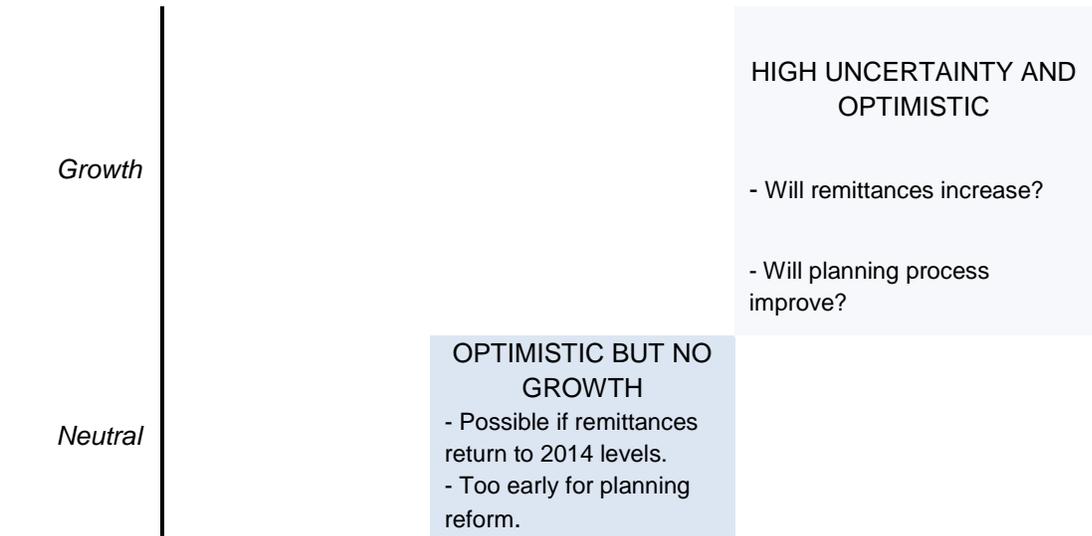
Local business conditions also contribute to demand. The application and planning process for new construction, primarily new residential builds in Bishkek City and Osh City, are cumbersome and costly.

The uptake of new construction is also hindered by inadequate financial facilitation and services. Credit service products, such as mortgages, are not widely available or accessible to the individual customer. In many cases, buyers have reverted to using non-monetary methods for payments, e.g. bartering with cars (Source: Interviews).

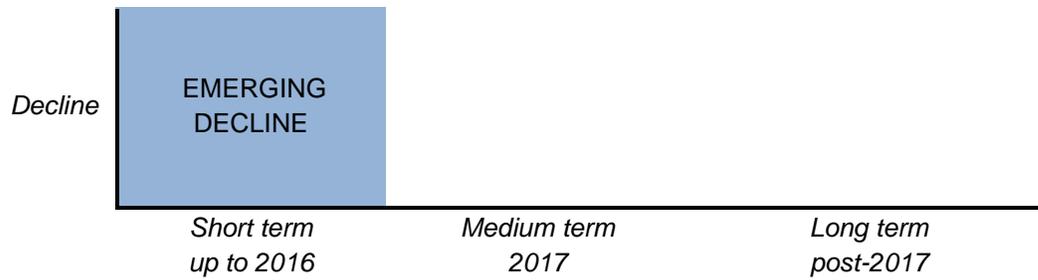
From the Focus Group, Workshop findings, and projecting from the current housing trends, three scenarios are presented:

- In the short term, demand for the construction industry (particularly residential) will decline dramatically;
- In the medium-term (2017), an optimistic scenario indicates limited growth but this will depend on worker remittances returning to 2014 levels;
- In the long term (after 2017), an optimistic scenario would envision an increase in demand for housing. There remains a strong demand, with over 400,000 people requiring housing, which will require approximately 30,000,000 sq. meters of new housing to be built⁴.

FIGURE 15. SCENARIO FOR NEW RESIDENTIAL CONSTRUCTION DEVELOPMENTS



⁴ Source: Ministry of Economic, Department of Strategy and Planning



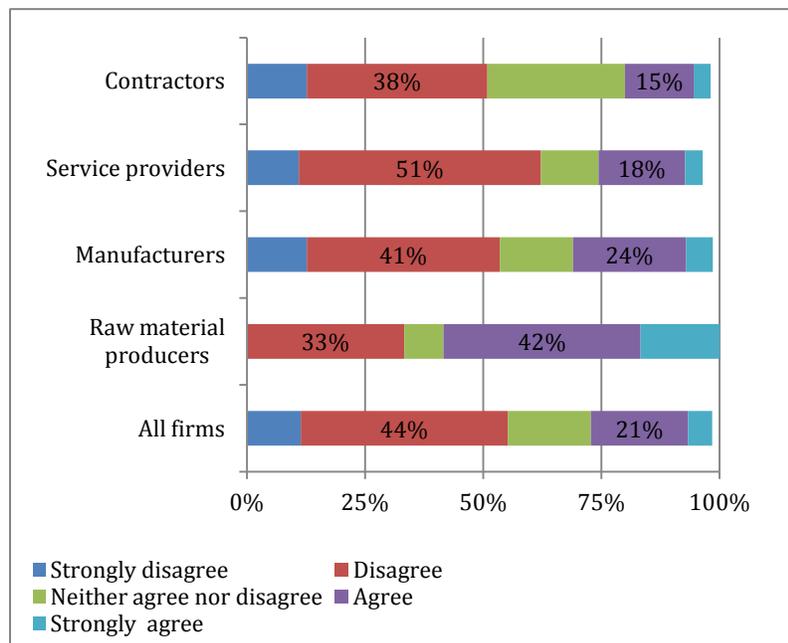
6 UNCERTAINTY OF THE CUSTOMS UNION

The Eurasian Customs Union was formed in 2010. The founding members were Belarus, Kazakhstan, and Russia. The Customs Union expanded in 2015 to include Armenia and Kyrgyzstan.

Industry representatives expressed two concerns associated with the Customs Union. First, there is a lack of information and understanding about the implementation and enforcement of the trade rules. Second, the impact of the new trade regime on business is unknown.

Producers and government certifiers are unclear on how to interpret and enforce the new rules emerging from the Customs Union. Several construction materials manufacturers noted that existing certified materials from the producers in Kazakhstan and Russia will be automatically eligible for sale in Kyrgyzstan and might flood the market. Director of the Republican Center of construction materials certification under Gosstroj noted that the Center currently lacks the physical laboratory technology to certify Kyrgyz products, particularly those products that are more contemporary than those included in the SNiP.

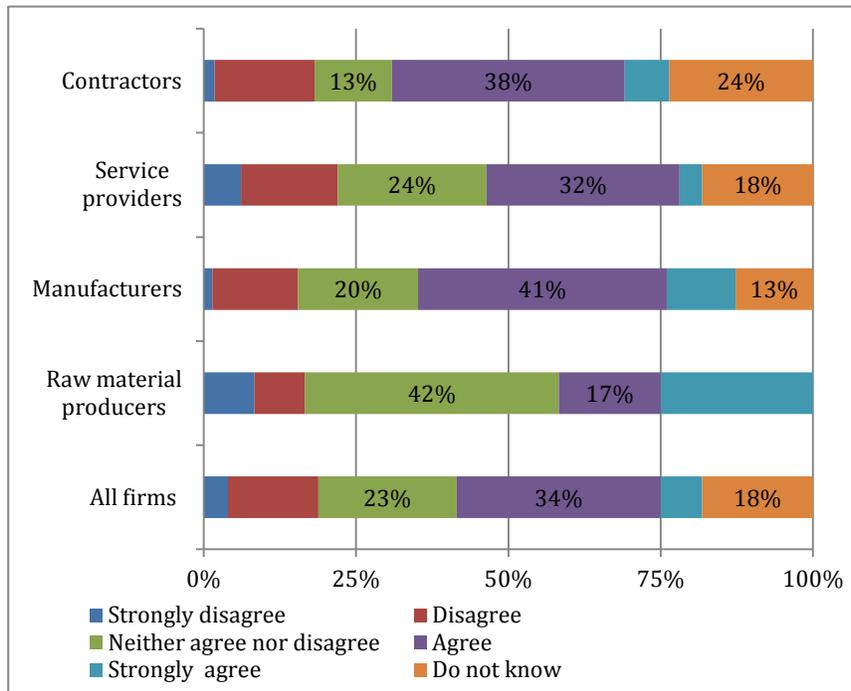
FIGURE 16. COMPANIES' INFORMATION ABOUT CUSTOMS UNION



The survey findings reveal that 55 percent of respondents indicated that they either strongly disagreed or disagreed with following statement: **I know all the relevant data about the Customs Union.** This finding shows that over half of all respondents do not have knowledge about the impact of the Customs Union on their business. Service providers were least aware (61 percent of respondents) while over half of raw material producers indicated a high awareness of the Customers Union.

Source: SSG/ IBC Survey

FIGURE 17. WILL THE CUSTOMS UNION BE GOOD FOR BUSINESS?



When asked if the Customs Union will have a positive or negative impact on their business, 40 percent of all respondents believed that the impact would be positive. Over half of manufacturers strongly agreed or agreed that the Customs Union would be good for business. Almost a quarter of all companies noted that they neither agreed nor disagreed (a further 18 percent did not know) which suggests that the level of awareness is low.

Source: SSG/ IBC Survey

6.1 CUSTOMS UNION SCENARIOS

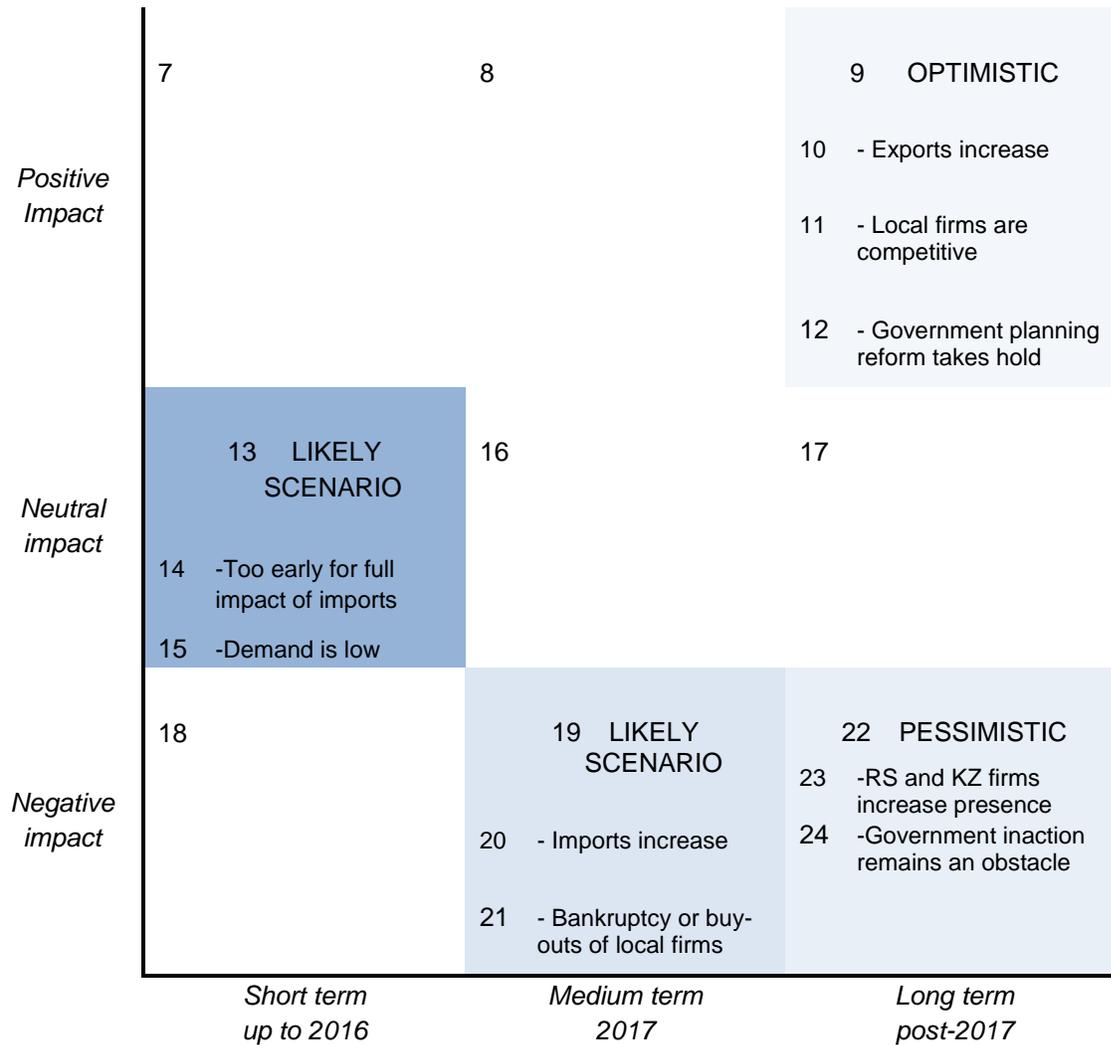
The possible impact that the Customs Union may have on the construction materials industry is uncertain at best. In the short-term, the impact may be minimal as the rules governing taxation, tariffs and standards require more work.

The prognosis for the medium and long-term scenarios is mixed. In the medium-term (2016 to 2017), imports will, in all likelihood, increase as Russian and Kazakhstan material manufacturers expand their presence in the Kyrgyz market. Products from Russian and Kazakhstan companies are familiar to local contractors. These products, primarily dry concrete, plasterboard, and other secondary materials, are cheaper and are perceived to be of a higher quality.

Two scenarios are possible in the long-term (after 2017). An *optimistic* situation could emerge should Kyrgyz companies improve productivity and quality. However, for this scenario to come true, planning and application reform is necessary to support the implementation of new construction, raise quality standards, and streamline the planning process. The combination of quality improvements and an effective planning process could encourage local demand for new housing.

A *downbeat* scenario is also possible. Local companies remain unproductive and cannot meet the quality standards and lower prices of products from Russia and Kazakhstan. Moreover, technical standards remain chaotic and the planning process cumbersome.

FIGURE 18. POSSIBLE IMPACT OF THE CUSTOMS UNION



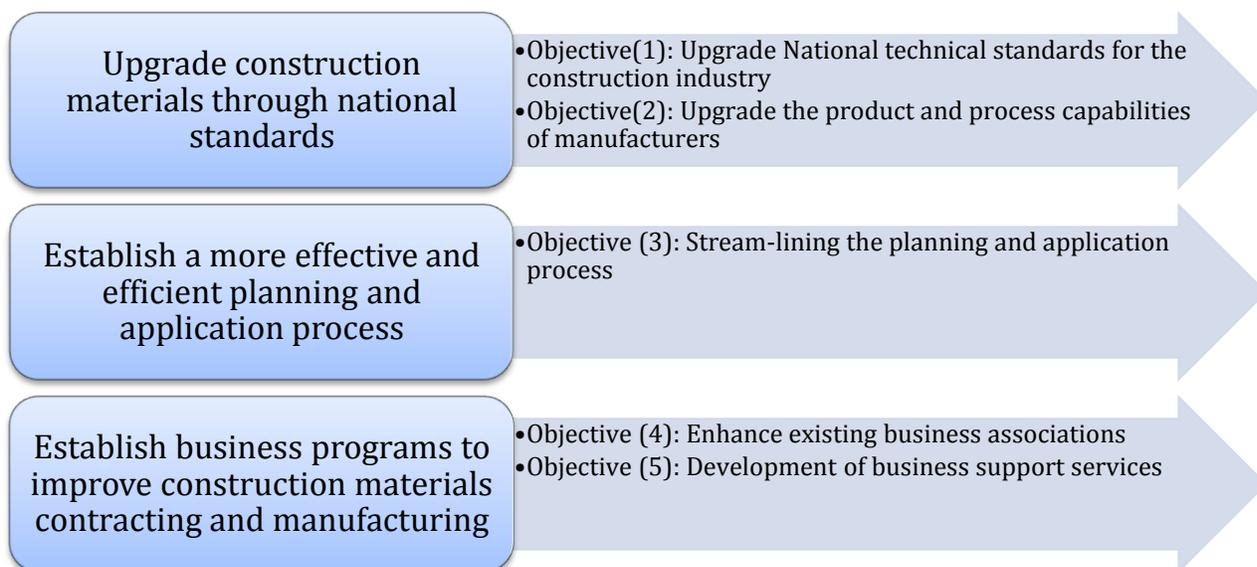
25 RECOMMENDATIONS

The study identified several weaknesses in the construction value chain and supporting services and infrastructure. Many of the challenges facing the industry, such as falling demand, are beyond this study's remit. On the other hand, external issues such as the Eurasian Customs Union could be a catalyst for upgrading technical capabilities. The following challenges emerged as priority areas during the interviews, focus groups and survey results:

- Lack of coordination and understanding of the proposed technical standards prescribed by the Eurasian Customs Union;

- Manufacturers and raw material producers provide low quality products and cannot meet other operational performance criteria;
- Government planning and application process is ineffective and inefficient; and
- Limited availability of business development programs and business collaborations has deterred business advancement and new market development.

To support the development of the construction materials value chain in Kyrgyzstan, three coordinated programs are proposed:



25.1 UPGRADING CONSTRUCTION MATERIALS THROUGH NATIONAL STANDARDS

The emerging Customs Union entails not only a new tariff regime, but also necessitates members to follow a common code for products, technology, and technical standards. This means that the Kyrgyz construction standards and codes will have to be amended and updated. Furthermore, these standards have to be communicated to businesses.

Given the imperative for Government to modernize the construction standards and codes, this will require businesses to meet these new requirements. The new standards will, in most cases, require technology, products, materials, and services to meet higher technical and quality thresholds than those demanded by previous regulations. The introduction of new national

construction standards will help ensure the improvement of inferior technological production processes and limited design capabilities.

25.1.1 Upgrading National technical standards for the construction industry

The outdated standard of Soviet construction was noted as a deep concern across all of the major stakeholders, including government planners, construction companies, and importers as a hindrance to modernization and efficient construction. Kyrgyzstan has yet to ratify a modern construction code. The Construction Norms and Regulations (SNiP), a holdover from the Soviet era, are no longer enforceable as the Kyrgyz government has repeatedly refused to renew their mandate. For now, according to construction companies and government oversight agencies, “everyone is building to their own standard.” Not only does this make construction companies nervous as they have no set definitions for a standard of quality, but it opens up a host of opportunities for corruption, as oversight agencies have the opportunity to deem any non-standard construction as unsafe or inadequate.

The following codes and regulation are relevant to the construction industry and require updating:

- Building Codes (SNiP)
- Industry Codes and Safety Rules
- Sanitation Regulations
- Fire Codes norms, instructions, procedures,

The full list of SNiP codes are listed in Appendix 4. SNiP Building Codes.

Government agencies and construction agencies, including SAACHCS and The Ministry of Economics, have prioritized raising construction standards for residential and commercial multi-story buildings. The re-ratification of the Soviet SNiP is no longer a viable option as these norms and regulations are over 20 years old and do not reflect the more durable and innovative construction materials now available in the market. (See Appendix 1. Government Roles and Responsibilities in the Construction Sector.)

Another imperative will be to support the translation of any new SNiP codes into Kyrgyz. This effort will require technical expertise and funding.

In an attempt to speed up the process and regulate the industry, construction agencies have proposed creating a public-private partnership with SAACHCS (or Gosstroj) in order to create a separate institute funded by construction company commissions that will employ specialists from SAACHCS and construction experts from the private sector to update the current construction regulations. The mandate for creating new construction standards lies with the Ministry of Economics Department of Standards. However, both construction agencies and representatives from the Ministry of Economics Department recognize the need to hand the mandate back to SAACHCS (given this organization’s technical expertise). IBC, construction companies, and Ministry representatives believe the transfer of this mandate to be feasible and will work with the Prime Minister’s Council for Economic Development to address this.

A public-private partnership could be introduced to facilitate and speed up this process⁵. In partnership with SAACHCS, IBC, and JIA (whose memberships include most of the leading private construction agencies), the public-private partnership could spearhead the steps required to establish the process and timeline necessary to modernize Kyrgyz construction standards. Precedent in other post-Soviet countries such as Georgia demonstrate that the public private partnership could take the form of an independent institute, loosely affiliated with SAACHCS, through which construction companies could commission joint work with SAACHCS officials to create and implement new codes and regulations. The promise of this independent institute, with or without a physical office, would allow construction company commissions to hire SAACHCS employees part time to jointly draft new norms and regulations.

In one workshop, SAACHCS and construction company representatives estimated that the drafting of new norms and regulations, appropriate for the sector and encouraging modernization and innovation, could take up to three years. Work on the new SNiP will heavily involve coordination with the regulations of the Eurasian Customs Union, as it is expected the process of harmonizing standards and regulations within the framework of the Eurasian Economic Commission. In order for the effective implementation of a public-private partnership, it is critical to create a more robust, formalized and representative private sector construction association (see Section 25.3.1).

25.1.2 Upgrading the product and process capabilities of manufacturers

With the launch of the new Customs Union, updating and enforcing SNiP codes and GOST standards will be required. Kyrgyz manufacturers and raw material producers will have to upgrade production technology and processes and improve product quality. The Customs Union construction standards could be the focal point for manufacturing upgrading as technical standards will be embedded and enforced by law, i.e. business will have to comply. As the organizing agent in the value chain, developers will ensure that only manufacturers and contractors that meet these new standards are used for construction activities.

Manufacturers and raw material producers will require different levels and types of support, while technical standards will vary depending on the product and service. The study revealed that compliance varies among businesses. Within the construction manufacturing industry, the SSG/ IBC survey noted the following:

- All clay brick manufacturers follow GOST but only 47 percent follow SNiP, 32 percent follow KNS, and less 14 percent of companies comply with the other standards;
- 80 percent and 90 percent of concrete brick manufacturers follow GOST and 63 percent follow KNS. The remaining standards are not followed;
- All cement manufactures follow GOST, but only 33 percent comply with SNiP and ISO 9000/ 9001. The other standards are not followed;
- All concrete manufactures follow GOST and 88 percent follow SNiP. Only 50 percent of companies follow ISO 9000/9001, and 38 percent follow KNS. The other standards are not followed; and

⁵ The Public-Private Partnership could be facilitated by BGI.

- All dry-mix plaster manufacturers follow GOST but only 25 percent follow SNiP. ISO 9000/9001 is followed by 50 percent of companies.

GOST product and service technical codes and the SNiP building codes will have to be updated once the common Eurasian Customs Union protocol is implemented. Firms will have to meet these standards and improve their product quality through better production technologies and management practices.

To meet the new construction standards, developers and manufactures will require support in three areas:

- (i) Understanding the new standards and how this new regime will affect their business;
- (ii) Training and investment in new process technologies; and
- (iii) Training and investment in new product materials.

A technology business service agency should be initially established outside the Government. These services will be mandated to provide technical support to manufacturers and raw material producers (and to a lesser extent service providers) on the practices required to meet the new construction standards.

The Government could shadow the technology service agency to ensure that work corresponds to other industry initiatives. Any necessary assistance for the technology support agency can be obtained at the end of month 36 from either an industry association (see Section 25.3.1) or a Government Ministry that provides business support services.

25.2 ESTABLISHING A MORE EFFECTIVE AND EFFICIENT PLANNING AND APPLICATION PROCESS

Currently, planning for private sector construction projects in Bishkek and the surrounding area is disordered and unregulated. Both the government and construction sectors recognize the inefficient nature of the current planning practices. Together, during the workshops, representatives from the government and construction sectors identified two specific areas to address that will make the planning and permitting processes more efficient and promote effective urban planning.

The Ministry of Economics could be encouraged to take up the “One Stop Window” for construction permitting from the Ministry to the Bishkek Architectural Authority. Although a good idea in theory, the “One Stop Window” currently does not function as planned, as the Ministry of Economics has no jurisdiction over permitting authorities, such as those governing water and sewage, electricity and zoning. Despite the “One Stop Window’s” supposed authority to sign off on all permits, construction company agents currently spend five to six months themselves running from agency to agency in order to successfully negotiate permit requirements. Only once companies come to an agreement with each of the agencies does the “One Stop Window” sign off. The fact that construction company agents must negotiate the permit processes, allows for a greater opportunity for difficulties and disagreements to arise, and thus dramatically slows the process. By moving the “One Stop Window” to the Bishkek Architectural Authority, housed under the Mayor’s office, the “Window” will have the authority and jurisdiction over the appropriate permitting agencies. More importantly, construction companies are willing to pay a commission for the services that the “Window” provides. This will provide the city with a new source of revenue, and simultaneously remove the wasted time construction companies currently face in obtaining permits.

Secondly, the City of Bishkek currently lacks formal, and clearly understood, procedures for urban planning. This is problematic as the city has autonomy over planning authority within the city boundary. The city is mandated to draw up a Plan for Detailed Planning (PDP), a holdover from the Soviet era, that zones and outlines potential construction sites into residential and commercial. The Bishkek Architectural Authority has been working on this for several years with no results. Both the construction and government representatives understand that any PDP the city produces will be outdated and lack any input from the private sector, which ultimately provides the capital for construction investment. The workshop participants recommended two possible solutions. The first solution is the least realistic, as it requires to work with the Kyrgyz government to remove the outdated PDP requirement from current legislation. SSG considers this to be less than realistic and perhaps even dangerous as it would leave no framework for urban planning in Bishkek or other cities and promote completely unregulated urban construction. The second and more realistic recommendation suggests to work with the Bishkek city government to create a more inclusive urban planning process through the current PDP process. The private construction sector, with support of donors organization, could facilitate a mapped public-private partnership process by which the city authorities and private sector investors could jointly analyze city infrastructure and allocate zoning for future urban development. The workshop representatives noted that this will be a time-consuming process, but that the result would promote planned urban growth, allow for more targeted investment in necessary infrastructure, and provide private construction sector investors with confidence in the legitimacy of their future investment.

25.3 ESTABLISHING BUSINESS PROGRAMS TO IMPROVE CONSTRUCTION MATERIAL CONTRACTING AND MANUFACTURING

At the industry level, business could be better supported across the value chain. Common interests such as business development services could improve productivity, and introduce new building designs, materials, and technologies. Business associations and trade affiliations will need assistance to establish the necessary organizational structures.

25.3.1 Enhance existing business associations

Primarily due to a lack of government leadership in construction planning and investment, several sectors of the construction industry have begun to form informal voluntary professional associations that promote some form of regulation in the sector. SSG recommends that investing resources to help these associations become more formal in their structures and governance will allow them to engage more effectively with the government in supporting construction sector development. The Value Chain exercise has identified two existing associations that could benefit from investment in development.

The first association is comprised of private construction companies and investors. Currently, due to a lack of cohesive legislation and planning, private sector construction companies and investors have created their own infrastructure for communication, planning and government advocacy. Over 80 private sector construction agents currently participate in a WhatsApp list-serve through which they communicate and negotiate on current and planned projects. Further, the industry created its own free mobile phone application “X” which lists current projects, disseminates information on the pricing and sourcing of materials, and improves communications about the current state of the market. Admittedly, the potential number of

participants in this association is limited due to the size of the market. However, many of the current participants are members of either IBC or JIA. The JIA currently has an informal construction sub-committee. The IBC/JIA partnership could be expanded to include a formalized construction association with mechanisms for engaging government and supporting new business initiatives.

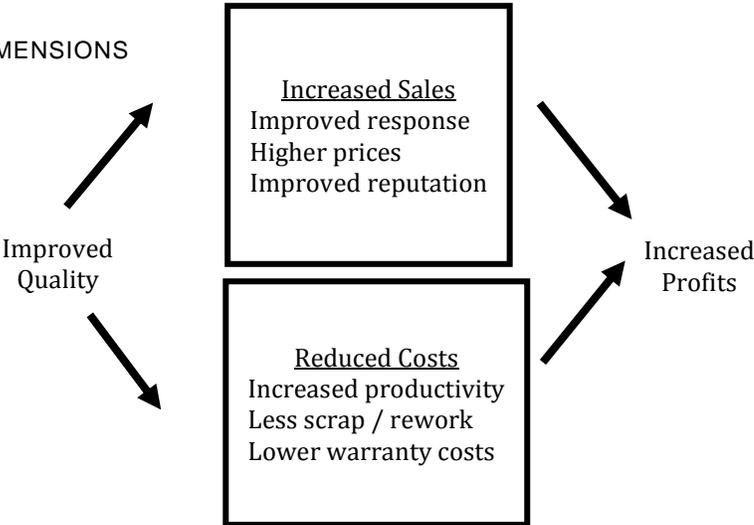
Secondly, the Association of Stonecutters (AoS), based around mining and extraction industries in the South, could immediately benefit from BGI investment. The informal association currently consists of 28 members and was formed for several purposes. Initially, the AoS banded together to create price stability as Kazakhstani and Russian clients began to drive down refined stone exports. The AoS was also formed to work with the state geological authorities. Currently, approximately 20 stone mining companies are conducting geological and environmental surveys in Southern Kyrgyzstan and approximately 18 applications have been submitted to the appropriate government agency for extraction permits. However, due to political concerns and disagreement, these applications have yet to be reviewed, with some applications submitted over nine months ago. Finally, in light of lagging government investment, the association formed to provide needed investment in roads and infrastructure from quarries to refining sites. To date, the AoS has pooled together approximately one half of the necessary funds to create and update the transportation infrastructure in the South. With the exception of price fixing, this level of self-organization is admirable. The AoS could directly benefit from investment in organizational development to assist in their governance and effectiveness at raising capital and lobbying the government for an enabling mining environment.

SSG recommends addressing these two associations as a priority for development. Other potential associations, such as brick-makers and/or distributors, can be supported should potential participants demonstrate a willingness to band together.

25.3.2 Development of business support services

As noted in Section 2.6, quality of performance is poor across the entire value chain spectrum. Services could be offered to improve quality of performance for manufactures and raw material producers. Improving quality is essential to reducing costs, improving sales and, ultimately, raising customer satisfaction.

FIGURE 19. QUALITY DIMENSIONS



Many quality programs make use of similar continuous improvement tools and techniques but will emphasize different quality performance factors. Three of the most common programs include:

- Total quality management (TQM) – puts quality and improvement at the heart of everything that is done by an operation.
- Lean – an approach that emphasizes the smooth flow of items synchronized to demand so as to identify waste.
- Six Sigma – a disciplined methodology of improving every product, process, and transaction

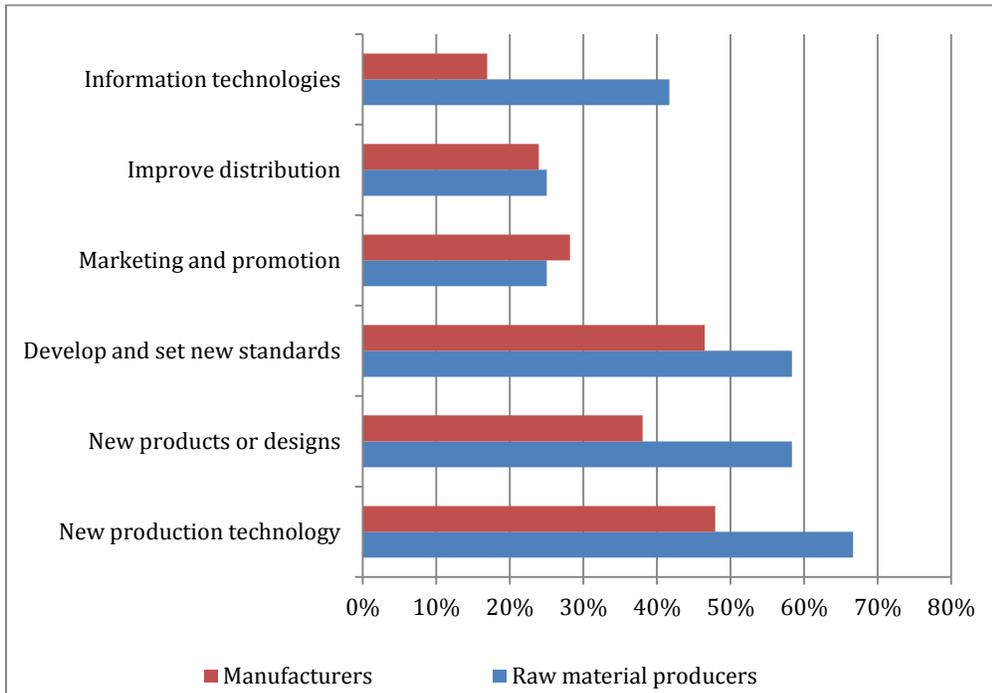
One other approach is to focus on uptake of ISO 9000/ 90001. This international standard (and the GOST equivalent) sets out established guidelines for the businesses to implement quality management systems and the steps required to meet these objectives.

Kyrgyz construction firms noted other performance gaps, such as poor delivery times and inadequate production flexibility. Quality improvement programs can apply, first to product and service quality, and after which, be directed to improve these other performance objectives.

Other business development services can be considered. Figure 20 highlights the business support priorities identified by manufacturers and raw material producers. New production technologies and new product design were the most popular areas to support. These priorities also complement the requirement to upgrade technical standards outlined in Objective 2 (see Section 25.1.2). The business associations that have been developed and strengthened (Section 25.3.1) could take over the technical services in the latter months of Program 2 to ensure continuity.

The business service programs would be introduced after the structures of the business associations have been upgraded, possibly in month 12. This would also allow any organization and project learning to be shared in the hopes of creating better practice. The business service programs would require initial support from months 6 to 36. A review will be to understand options for the program, such as direct or indirect government support and industry fees or shutting down services (i.e. sun-set programs).

FIGURE 20. INTEREST SHOWN FOR INDUSTRY SUPPORT FOR MANUFACTURERS AND RAW MATERIAL PRODUCERS



Source: SSG

25.4 PROPOSED WORK PLAN

Aim: To upgrade the Kyrgyz construction materials value chain

Three programs (five objectives) over 36 months.

First Program: Upgrading construction materials through national standards

Objective	Possible mechanisms/ interventions	Activities	Participants	Time frame
(1) Upgrading technical standards for the construction industry	<p>Establish a project with set work plan and management structure. Project team would include relevant Government Department/ Ministries, Developers and external consultants with technical expertise.</p> <p>The project would best be implemented through a Government-led initiative (given the current and historical government – business culture).</p> <p>The goal is to support the Government to understand and internalize the upcoming standards as stated in the Customs Union.</p> <p>Introduce a set of 'Kyrgyz' standards that can support new materials and designs for the geological conditions</p>	<p>Provide technical information to Government offices pertaining to the new construction industry standards as a result of the Customs Union</p> <p>Upgrade testing and quality standards for Kyrgyz Agencies that test constructions products</p> <p>Develop and establish advanced Kyrgyz standards to support new building designs (perhaps a longer term activity)</p> <p>Work would be conducted over bi-monthly meetings</p>	SAACHCS Developers Manufactures	Months 1-36 Month 20 Review
(2) Upgrading the product and process capabilities of manufacturers	<p>To meet the new construction standards, developers and manufactures will require support in three areas:</p> <p>(i) Understanding the new standards and how this new regime will affect their business;</p> <p>(ii) Training and investment in new process technologies;</p> <p>(iii) Training and investment in new product materials and designs.</p> <p>A technology business service provider should be established, initially outside the Government. These services will be mandated to support manufacturers meet the new standards. The Government could shadow this parallel service provider. A decision to locate the service provider can be made at the end of Month 36.</p>	<p>Dissemination of new standards to developers and manufacturers</p> <p>Training assistance to manufacturers in new operational process</p> <p>Training assistance to manufacturers in new materials and product designs</p> <p>Establish a match-funding investment, should new plant and equipment be required</p>	Developers Manufactures	Months 6-8 (training of staff/ hiring external consultants) Months 9-36 implementation

Second Program: Establishing a more effective and efficient planning and application process

Objective	Possible mechanisms/ interventions	Activities	Participants	Time frame
(3) Stream-lining the planning and application process	<p>Business-Government Partnership through a 'New planning forum'.</p> <p>An external facilitator / project manager can manage the forum with a set of deliverables and deadlines.</p>	<p>Develop a transparent and speedy planning and application process that can maintain quality standards</p> <p>Different Forums will have to be established for the City of Bishkek and the City of Osh.</p>	<p>The Ministry of Economics SAACHCS City of Bishkek Developers Contractors</p>	<p>Months 1-18 Parallel program that can run alongside other programs</p>

Third Program: Establishing business programs to improve construction materials contracting and manufacturing

Objective	Possible mechanisms/ interventions	Activities	Participants	Time frame
(4) Enhance existing business associations	<p>Business-Business Partnerships to introduce services which can advance construction manufacturing</p> <p>Build on existing and latent business affiliations and associations.</p> <p>An external facilitator / project manager can manage the forum with a set of deliverables and deadlines.</p>	<p>Trade association development</p> <p>Export and new market promotion</p>	<p>Developers Contractors Manufactures</p>	<p>Month 6-36 The lessons from Program 2 should reviewed before the launch of this program</p>
(5) Development of business support services	<p>Through the enhanced business associations, business service programs could be introduced.</p>	<p>New designs development</p> <p>General business skills training</p>	<p>Business associations</p>	<p>Month 12-36 The program can take over the services in Objective 2.</p>

Gantt chart

Objective	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
Upgrading technical standards for the construction industry	█		█		█		█		█		█		█		█		█		█		█		█		█		█		█		█		█		█		█	
Upgrading the product and process capabilities of manufacturers					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█													
Stream-lining the planning and application process	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█																						
Enhance existing business associations						█	█	█	█	█	█			█			█			█			█			█			█			█			█			
Development of business support services												█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

APPENDIX 1. GOVERNMENT ROLES AND RESPONSIBILITIES IN THE CONSTRUCTION SECTOR

Section 1) Customs Union and Standardization Agents

The key agents charged with integration of the customs union and regulations fall under the jurisdiction of the republican government under the Prime Minister. The key two agencies responsible for integration and standardization are:

- I. Ministry of Economy and its sub-divisions
- II. State Agency for Architecture, Construction, Housing and Communal Services and its sub-divisions

Below is a list of the Ministry and State Agency's sub-divisions that participate in the Customs Union and standardization processes.

It should be noted that the roles of these agencies and the effectiveness at fulfilling their roles is unclear. Focus group and workshop participants, themselves representatives of these agencies, themselves noted that their roles and responsibilities under the new Eurasian Customs Union remain unclear.

I. Ministry of Economy

- Currently controls overarching investment and financial planning
 - Lead on general Customs Union integration
- i. Department for Technical Regulation and Metrology
 - ii. Center for Standardization and Metrology
 - iii. State Agency for Architecture, Construction, Housing and Communal Services (hereinafter referred to as "Gosstroj")

The Gosstroj is an administrative agency that exercises functions as executive body with regard to architecture, construction, housing and communal services.

One of the main tasks of the Gosstroj is to prepare and implement state policy in the field of architecture and urban development activity⁶.

The Gosstroj has its subordinate and territorial subdivisions.

⁶ Statute on the State Agency for Architecture, Construction, Housing and Communal Services under the Government of the Kyrgyz Republic (approved by the Regulation of the Government dated June 24, 2013 #372).

- I. State Institute for Antiseismic Construction and Engineering Design under the Gosstroï
- II. Republican Center for Certification in Construction Sector under the Gosstroï
- Responsible for certification of construction materials

Section 2: Oversight and Permitting Authorities in Bishkek

Within the city of Bishkek, the largest market for multi-story housing and commercial construction, the construction process has a very strict and regulated environment with 12 stages of permits and negotiations, opening the way for graft and corruption. These stages are outlined below.

Recently the Gosstroï retained the dysfunctional “One Stop Window” that was supposed to facilitate permit process to allow construction. The Gosstroï does not have jurisdiction over the mainly communal services permitting agencies/registration bodies that fall under the Office of the Mayor of Bishkek.

On July 1, 2015 in order to improve implementation of the policy of urban development and architecture in Bishkek the Government of the Kyrgyz Republic adopted the Regulation #430 "On Transfer of the State Enterprise "Main Department for Architecture and Urban Development of Bishkek City⁷" under the State Agency for Architecture, Construction, Housing and Communal Services under the Government of the Kyrgyz Republic to the Municipal Ownership of Office of the Mayor of Bishkek".

The final permitting authority, which certifies the compliance of all construction with current regulations, is the State Inspectorate of Environmental and Technical Safety, the Office of Architecture and Construction Supervision, led by Director Abdusamat Bolotbaev.

Stage	Documents	Registration body
1	Topographical survey, engineering geological conclusion.	JSC “Kyrgyz GIIZ”
2	Seismic conclusion	Institute of Seismology
3	Preliminary design	Company
4	Town planning council	Bishkek Glav Architecture
5 (technical conditions)	Architecture planning conditions APC/ Engineering technical conditions ETC	Bishkek Glav Architecture
	Electricity supply system section	Severelectro, NESK
	Water supply and sewage system	Gorvodokanal
	Heating system	Bishkekteploset
	Gas supply system	Bishkekgas

⁷ Bishkek Glav Architecture.

Stage	Documents	Registration body
6 (external system)	External water supply and sewage system section	(no formal registration)
	External electricity supply system section	(no formal registration)
	External heating system section	(no formal registration)
	External gas supply system section	(no formal registration)
7 (contractor design)	General plan section	Company
	Architecture construction section	Company
	Constructive construction section	Company
	Heating and ventilation section	Company
	Water supply and sewage section	Company
	Electricity supply section	Company
	Technical features section	Company
Security fire alarm section	Company	
8	Preliminary approval	Bishkek Glav Architecture
9	Approval	Bishkek Glav Architecture
10	Expertise	Gosstroy
11	Technical inspection	Gossecotechinspection
12	Field supervision	Company

APPENDIX 2. EXECUTIVE SUMMARY – INTERIM REPORT

The aim of the Kyrgyzstan Business Growth Initiative (BGI) Project, Kyrgyzstan Construction Materials Value Chain and Stakeholder Analysis is to conduct an analysis of the construction materials value chain in the Kyrgyz Republic.

The information informing this Interim Report was collected during SSG Advisors' first mission from March 24 to April 22, 2015 in Bishkek and Osh, Kyrgyz Republic.

This project makes use of a value chain framework to inform the scope and scale of research. The research methods used to gather the information included open-ended questions, semi-structured questions for key informants and focus groups. Quantitative and qualitative data were collected.

The construction value chain consists of four sets of activities: raw materials and materials processing, manufacturing of construction materials, construction and contracting services, and services pertaining to markets. The composition of the products manufactured and the services performed in each country will vary.

The main construction materials produced in Kyrgyzstan include cement, concrete, bricks (clay and autoclaved cellular concrete, or ACC), dry mix plaster, and limestone tiles. A critical construction material import is steel rebar, which is brought in from Russia and Kazakhstan.

Property developers are the key gatekeepers to the construction sector. These companies set out the plans, manage the projects, and organize the financing for construction projects. Large developers also perform some or most of the construction activities, while smaller developers sub-contract to construction and service companies.

According to developers, the demand for new building start-ups has declined dramatically in 2015.

The main contracting activities are brick masonry, concrete mixing, and internal installation of basic windows, elevators, and utilities. Contractors purchase directly from local producers, although developers often select preferred suppliers.

Construction material safety and quality standards are nominally overseen by the State Agency for Architecture, Construction, Housing and Communal Services (SAACHCS). A significant limitation to the coordination of quality inspections and permit provision is the lack of a coherent government plan on construction and zoning.

The certification of construction materials and on-site verification is housed under the Republican Center for Certification of Construction. The de facto construction material certification standard for the industry is the Construction Norms and Regulations (SNiP), which is a holdover from the Soviet Union. SNiP has not been updated to include contemporary international construction material standards.

Labor health and safety standard for construction materials and labor are highly regulated, but poorly enforced.

There are 120 technical/vocational institutions providing education in construction-related subjects such as welding, masonry, and construction processes.

There are two universities providing education in engineering and architecture. These are the Kyrgyz State University of Construction, Transport, and Architecture (KSUCTA) and the Kyrgyz-Russian University (KRU). KSUCTA noted that 70-80% of graduates have gained employment in their field of specialization. KRU noted that many of their alumni have left the country for work in Russia, Kazakhstan, and even United Arab Emirates. KRU diplomas are accredited in Russia.

During interviews with businesses and policy makers, the following issues were raised: falling demand for apartment and housing construction; uncertainty about the new requirements of the Customs Union; patent allocation; unregulated waste water treatment; regional disparity in capacity and oversight; limited manufacturing base; under-developed technological capabilities and skills; limited demand and access to new designs; and unregulated businesses.

APPENDIX 3. SSG/ IBC SURVEY

IBC and JIA Kyrgyzstan

Construction Materials Questionnaire

The International Business Council and Association of Legal Entities JIA are currently carrying out a survey among companies operating in the construction sector. Thanks to private companies active participation we have been conducting IBC investment survey for 11 years, its results have been widely discussed and used by public and private sectors, donor agencies, NGOs and other organizations in studying and analyzing the investment climate in Kyrgyzstan and in improving the investment climate in the country. The objective of the survey that we are conducting today is to investigate the trends and activities performed by the construction sector. We are collecting information on company activities and your input is important. We are meeting with raw material producers, manufacturers and contractors and developers. The goal is to reveal areas in the industry which may require support. We request kindly that you spare 10 minutes from your busy schedule and answer the following questions. All information will be held in confidence to ensure confidentiality.

1. Company name:	
2. Contact name:	
3. Number of employees today	
4. Turnover for 2014	

5. Type of company
- Raw material producer
- Manufacturers
- Service provider
- Contractor

6. What materials do you produce?
- Clay Gypsum
- Sand Limestone
- Rock Coal

Other (<i>please state</i>)

7. What products do you manufacture?

- | | | | | | |
|-----------------|--------------------------|------------------------------|--------------------------|---------------------------|--------------------------|
| Clay bricks | <input type="checkbox"/> | Dry mix plaster | <input type="checkbox"/> | Doors (metal) | <input type="checkbox"/> |
| Concrete bricks | <input type="checkbox"/> | Plaster board | <input type="checkbox"/> | Doors (wood) | <input type="checkbox"/> |
| Cement | <input type="checkbox"/> | Limestone tiles (travertine) | <input type="checkbox"/> | Metal structures, roofing | <input type="checkbox"/> |
| Concrete | <input type="checkbox"/> | Plastic window/ door frames | <input type="checkbox"/> | Electrical items | <input type="checkbox"/> |
| Glass | <input type="checkbox"/> | Plastic pipes | <input type="checkbox"/> | Paint | <input type="checkbox"/> |
| | | | | Foam insulation | <input type="checkbox"/> |

Other (*please state*)

8. What services do you offer?

- Retails shops
- Wholesale – sell to retail
- Distributor/ Agent sell to manufacturers

Other (*please state*)

9. What construction contracting services do you offer?

- | | | | |
|-----------------------------------|--------------------------|----------------|--------------------------|
| Developers | <input type="checkbox"/> | Architects | <input type="checkbox"/> |
| Construction – residential | <input type="checkbox"/> | Plumbers | <input type="checkbox"/> |
| Construction – commercial | <input type="checkbox"/> | Electricians | <input type="checkbox"/> |
| Construction – utility | <input type="checkbox"/> | Engineers | <input type="checkbox"/> |
| Construction – roads and railways | <input type="checkbox"/> | Surveyors | <input type="checkbox"/> |
| Other construction | <input type="checkbox"/> | Foam installer | <input type="checkbox"/> |

Other (*please state*)

10. How many buyers do you have today?

11. How many buyers did you have in 2014?

12. Who do you sell your products to?

- Individuals/ consumers living in Kyrgyz Yes No
- Individuals/ consumers living outside of Kyrgyz Yes No
- Local Kyrgyz companies Yes No
- Local Kyrgyz agents or distributors Yes No
- Kyrgyz Government or agencies Yes No
- Companies from Kazakhstan Yes No
- Companies from Russia Yes No

13. For those buyers you sell to, who are your most important buyers (by per cent or share of sales in 2014)?

	Percent of total sales in 2014
Individuals/ consumers living in Kyrgyz	
Individuals/ consumers living outside of Kyrgyz	
Local Kyrgyz companies	
Local Kyrgyz agents or distributors	
Kyrgyz Government or Agencies	
Companies from Kazakhstan	
Companies from Russia	
	100

14. How important are the following criteria to your main buyer?

	Very important	Important	Neither important nor unimportant	No so important	Unimportant	Do not know/ No answer
Product or service quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On time delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lowest price	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexible volume	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Variety of products or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You can offer new products or new designs or new services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Please assess the performance of your company.

	Better than international competitors	Better than local competitors	Same as competitors	Not as good as competitors	We are under performing and in trouble	Do not know/ No answer
Product or service quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On time delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offering the lowest price	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offering flexible volume	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offer a variety of products or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offering new products or new designs or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Does your company follow any of these quality standards?

- GOST SNiP
- EH KNS
- ISO 9000/ 9001 None of the above

17. How many suppliers do you have today?

18. How many suppliers did you have in 2014?

19. From whom do you purchase your supplies?

- | | | |
|-------------------------------------|------------------------------|-----------------------------|
| Local Kyrgyz companies | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Local Kyrgyz agents or distributors | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Companies from Kazakhstan | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Companies from Russia | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Companies from China | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Companies from Turkey | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

Other (please state and rank)

20. What is the current situation of your company? (COMPARE TO SAME TIME IN APRIL 2014)

	Increased by 50% or more from 2014	A little higher than 2014	The same as 2014	A little less than 2014	Decreased by 50% or more from 2014	Do not know or no answer (Missing
Price you sell to buyers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orders from buyers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inventory you hold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Price of main supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orders placed to suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labour costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of electricity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Who are your main competitors?

	Competitor rank
Local Kyrgyz companies	
Unregulated Kyrgyz companies	
Companies from Kazakhstan	
Companies from Russia	
Companies from China	
Companies from Turkey	

Other (*please state and rank*)

22. Please indicate where you agree or disagree with the following statements

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Do not know or no answer (missing)
I know all the relevant details about the new Customs Union	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The new Customer Union will be good for business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees have satisfactory skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are dependable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vocational and technical training is satisfactory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical assistance is available to solve any business problem I encounter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The company follows health and safety procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The company has adequate air and waste water environmental safeguards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government regulations support business activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. Are you interested to work with other companies in your industry?

Yes No

24. What type of business collaborations interest you?

- Develop and set new standards Improve distribution
- To work on new products or designs Information technologies
- To work on new production technology Lobbying
- Marketing and promotion

Other (please state)

25. Are you interested to work with Local Government and National Government to support your industry?

Yes No

26. What types of business-government collaborations interest you?

Develop and set new standards

Infrastructure

Business regulations

Marketing and promotion

Support new technologies

Information technologies

Other (*please state*)

27. Are there any companies you believe we should interview? Please provide any contact details.

Thank you for your assistance in this initiative. All information is confidential.

If you have any have questions please contact:

Meerim Matkulova
International Business Council
Office 113, Hyatt Regency Bishkek
191, Abdrakhmanova str., Bishkek
720011, Kyrgyz Republic
Tel.: +996 312 623801
Fax: +996 312 623394
www.ibc.kg

APPENDIX 4. SNIP BUILDING CODES

Euro Asian Council for Standardization, Metrology and Certification (EASC) is recognized by the International Organization for Standardization (ISO). The following SNIp codes are derived from the Russian SNIp codes (which may be the reference for the Customs Union SNIp). In addition, there are unique SNIp codes for Kazakhstan. Other codes to consider are SN (construction norms, sanitary norms), and GN (hygienic standards for construction).⁸

SNIp 2.09.03. On designing of anchor bolts for mounting of building structures and equipment
SNIp II-23-81 on design of strengthening of steel structures
SNIp 06.03-85 Motor roads
SNIp 1.04.03-85 Norms of Duration of Construction and Progress in the Construction of Enterprises, Buildings and Facilities
SNIp 1.06.04-85 Provisions on Chief Engineer
SNIp 1.06.05-85 Regulation on construction design supervision of enterprises, buildings and installation by design organizations
SNIp 10-01-2003 System of normative documents in construction Basic principles
SNIp 10-01-94 System of normative documents in construction. Basic provisions.
SNIp 11-01-95 Instructions on the procedure of elaboration, coordination, approval, and composition of design documentation for construction of enterprises, buildings, and structures
SNIp 11-02-96 Engineering surveying for construction. fundamentals
SNIp 11-04-2003 Guidelines on procedure of development, agreement upon, assessment and approval of town-planning documentation. Basic principles for urban planning and design (instruktion).
SNIp 11-107-98 Procedure for the development and composition of the section "Technical engineering civil defence measures. Emergency prevention measures" of building projects.
SNIp 11-39-76 Railways of 1520 mm
SNIp 11-7-81 Hydro-engineering structures in seismic areas
SNIp 12-01-2004 Organization of construction
SNIp 12-03-2001 Labor safety in construction industry
SNIp 12-03-99 Occupational safety in construction part one. General safety requirements
SNIp 12-04-2002 Safety in construction. Part 2. Construction works
SNIp 2.01.01-82 Construction climatology and geophysics
SNIp 2.01.02-83 Sub-bases for buildings and structures
SNIp 2.01.02-85 Fire-prevention standards
SNIp 2.01.07-85 Loads and impacts
SNIp 2.01.14-83 Determination of design hydrologic characteristics
SNIp 2.01.15-90 Engineering protection of territories, buildings and structures from hazardous geological phenomenon. Principal provisions of design
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⁸ Source: GOSTPEREVOD, www. <http://gostperevod.com/> (accessed 4 August 2015).

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USAID Business Growth Initiative Project

15 Razzakov Street
Office 6, Second Floor
Bishkek, 720040, Kyrgyz Republic
Tel/Office: +996 312 30 07 37
Fax: +996 312 30 02 18



The USAID Business Growth Initiative (BGI)

15 Razzakov Street, Office 6, Second Floor,
Bishkek, 720040, Kyrgyz Republic

Tel/Office: +996 312 30 07 37; **Fax:** +996 312 30 02 18

e-mail: usaid.bgi.project@gmail.com

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