Kazakhstan: Fostering Productive Innovation Project (P150402)

Key Dates

Key Project Dates

- Bank Approval Date: 22-Dec-2014
- Effectiveness Date: 01-Mar-2016
- Planned Mid Term Review Date: 14-May-2018
- Actual Mid-Term Review Date: 21-May-2018
- Original Closing Date: 31-Dec-2020
- Revised Closing Date: 31-Dec-2020

Project Development Objectives

The Project Development Objective (PDO) is to promote high-quality, nationally relevant research and commercialization of technologies.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

Components

- Development of the Knowledge Base for Innovation: (Cost $25.90 M)
- Innovation Consortia: (Cost $25.10 M)
- Consolidation of the Technology Commercialization Cycle: (Cost $13.00 M)

Overall Ratings

<table>
<thead>
<tr>
<th>Name</th>
<th>Previous Rating</th>
<th>Current Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress towards achievement of PDO</td>
<td>Moderately Satisfactory</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Overall Implementation Progress (IP)</td>
<td>Moderately Satisfactory</td>
<td>Moderately Satisfactory</td>
</tr>
<tr>
<td>Overall Risk Rating</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Implementation Status and Key Decisions

Project implementation status to date by component is as follows:

Component 1 (Development of the Knowledge Base for Innovations): Two selection rounds of Senior Scientist Junior Researcher Grant Program were completed resulting in selection of 43 sub-projects currently being implemented. 27 sub-projects have already registered commercial sales of nearly USD 1.4 mln. A Patent Cooperation Treaty
(PCT) applications were filed by the beneficiaries of SSG-JRG grant program. PhD Research Grant Program was launched in the beginning of August 2018, two selection rounds were completed and 11 grant agreements were signed.

**Component 2 (Technology Consortia for Inclusive Innovation):** three Industry-led Productive Sector Consortia are being implemented since November 2017, two industry led and one university led PSC were launched in October 2018 and eight Inclusive Innovation Consortia are being implemented since June 2019.

**Component 3 (Consolidation of the Technology Commercialization Cycle):** Technology Brokerage activity has been completed in July 2019. Technology brokerage team demonstrated significant results by helping 27 research groups reach a stage of commercial sales amounting to about USD 1.4 mln and concluding 15 intellectual property (IP) rights transfer and licensing deals.

The selection process for an international consulting company to complement subcomponent 3.4 activity by building the capacity of university TTOs and establishing technology transfer linkages with technology markets is ongoing and is expected to be completed in the beginning of October 2019. On September 6, 2019, Technical Evaluation Report was submitted by PMU for the Bank's review. WB team is following up closely with the client on the process to avoid delays.

The design of the ESVC Fund has been completed and the MoES is currently working out the implementation arrangements including possible transfer of the subcomponent implementation to QazTech Ventures Joint Stock Company (JSC), a state-owned development institution and the national operator of venture capital activities.

**Component 4 (Strengthening Coordination of the National Innovation System; Enhancing the Capacity of the Existing Institutional Structures):** The design of Innovation Observatory has been completed and the pilot version of the “Aggregator” – register of international grant programs - was launched. PMU launched initial activities of the Innovation Observatory, such as national innovation system review and plans to publish it in September 2019. However, the Ministry of Education needs to speed up implementation of other activities, such as establishment of stakeholder engagement platform to see full benefits of the Innovation Observatory as per Project design.

### Risks

**Systematic Operations Risk-rating Tool**

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Rating at Approval</th>
<th>Previous Rating</th>
<th>Current Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political and Governance</td>
<td>--</td>
<td>Substantial</td>
<td>Substantial</td>
</tr>
<tr>
<td>Macroeconomic</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sector Strategies and Policies</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Technical Design of Project or Program</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Institutional Capacity for Implementation and Sustainability</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Fiduciary</td>
<td>--</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Environment and Social</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Other</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Overall</td>
<td>--</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

### Results

**PDO Indicators by Objectives / Outcomes**

Improve Quality and Commercial Relevance of R&D in Kazakhstan

**International publications from Senior and Junior Research Groups in peer reviewed journals (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>7.00</td>
<td>28.00</td>
<td>42.00</td>
<td>14.00</td>
</tr>
<tr>
<td>Date</td>
<td>31-Dec-2015</td>
<td>20-Feb-2019</td>
<td>06-Sep-2019</td>
<td>31-Dec-2020</td>
</tr>
</tbody>
</table>

**Share of enterprise sector financing of R&D in Senior & Junior Scientist Research Grant Program (annual) (Percentage, Custom)**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
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<tr>
<td>Value</td>
<td>5.50</td>
<td>7.00</td>
<td>8.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Date</td>
<td>31-Dec-2015</td>
<td>20-Feb-2019</td>
<td>06-Sep-2019</td>
<td>31-Dec-2020</td>
</tr>
</tbody>
</table>

**The number of innovation consortia that graduated from innovation consortia grant program (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
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<td>0.00</td>
<td>0.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Date</td>
<td>31-Dec-2015</td>
<td>20-Feb-2019</td>
<td>06-Sep-2019</td>
<td>31-Dec-2020</td>
</tr>
</tbody>
</table>

**Technology-based start-ups created under the project and making commercial sales (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>6.00</td>
<td>18.00</td>
<td>27.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Date</td>
<td>31-Dec-2015</td>
<td>20-Feb-2019</td>
<td>06-Sep-2019</td>
<td>31-Dec-2020</td>
</tr>
</tbody>
</table>

**Patent Cooperation Treaty agreements approved for project beneficiaries (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
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<td>0.00</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Date</td>
<td>31-Dec-2015</td>
<td>20-Feb-2019</td>
<td>06-Sep-2019</td>
<td>31-Dec-2020</td>
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</tbody>
</table>

**Comments:**

The number of technology consortia applications during the second round increased threefold in comparison with the first round even with minimum 30% co-financing requirement. The team expects significant increase of disbursements by December 2018. If the client decides to extend the project, then additional third selection round is likely to absorb the allocated funds. If the project is not extended, the target will decrease by 20 mln.

**Patent Cooperation Treaty agreement take very long time to obtain, so the first results are expected only in 2019.**

**Intermediate Results Indicators by Components**
### Developement of the Knowledge Base for Innovation

- **Grants approved for Senior and Junior Research Groups (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
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<tr>
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<td>33.00</td>
<td>75.00</td>
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<table>
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<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
</table>

**Comments:** The PhD Grant Program is expected to be approved and launched in the beginning of August, so this indicator will start changing in 2019 and the target is still achievable.

- **Ph. D. holders and students trained abroad (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
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<td>0.00</td>
<td>11.00</td>
<td>100.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
</table>

### Innovation Consortia

- **Completed projects with social impact (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
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<td>5.00</td>
<td>5.00</td>
<td>9.00</td>
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<table>
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<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
</table>

- **Applications for financing consortia created based on a cooperation agreement (annual) (Number, Custom)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
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<td>95.00</td>
<td>50.00</td>
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<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
</table>

- **The number of innovation consortia established (Number, Custom)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
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<tbody>
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<td>0.00</td>
<td>6.00</td>
<td>14.00</td>
<td>10.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Baseline</th>
<th>Actual (Previous)</th>
<th>Actual (Current)</th>
<th>End Target</th>
</tr>
</thead>
</table>

### Technology Commercialization Cycle Consolidation

- **License agreements signed (annual) (Number, Custom)**
The number of direct project beneficiaries has grown since last mission (from 502 in February 2019 to 1,798 as of September 2019) due to a large number of beneficiaries in frame of subcomponent 3.3 - researchers trained in Academic writing in English.
Data on Financial Performance

Disbursements (by loan)

<table>
<thead>
<tr>
<th>Project</th>
<th>Loan/Credit/TF</th>
<th>Status</th>
<th>Currency</th>
<th>Original</th>
<th>Revised</th>
<th>Cancelled</th>
<th>Disbursed</th>
<th>Undisbursed</th>
<th>% Disbursed</th>
</tr>
</thead>
<tbody>
<tr>
<td>P150402</td>
<td>IBRD-84630</td>
<td>Effective</td>
<td>USD</td>
<td>88.00</td>
<td>64.00</td>
<td>24.00</td>
<td>27.80</td>
<td>36.20</td>
<td>43%</td>
</tr>
</tbody>
</table>

Key Dates (by loan)

<table>
<thead>
<tr>
<th>Project</th>
<th>Loan/Credit/TF</th>
<th>Status</th>
<th>Approval Date</th>
<th>Signing Date</th>
<th>Effectiveness Date</th>
<th>Orig. Closing Date</th>
<th>Rev. Closing Date</th>
</tr>
</thead>
</table>

Cumulative Disbursements
Restructuring History

Level 2 Approved on 28-Dec-2018

Related Project(s)

There are no related projects.