Summary of Key Findings

In March 2017, the Government of Maharashtra issued the Maharashtra City Taxi Rules, 2017 (Rules) for regulating the taxis linked with app based aggregators.

CUTS International has applied the RIA tool to estimate costs and benefits of select key provisions of the Rules, likely to have direct and substantial impact on drivers and consumers linked with app based taxi aggregators. The analysis has been informed by in-person interactions with 1,000 drivers and 1,000 users of city taxi services in Mumbai Metropolitan Region and consultations with relevant stakeholders.

It was found that different Rules impact diverse stakeholders in divergent manner. For instance, while B/Y taxis are likely to be positively impacted by the Rules owing to likely increase in demand, compact hatchback taxis are expected to be severely negatively impacted owing to likely exit from the market. A stakeholder wise impact of Rules reveals the following picture:

1. Consumers

If the Rules are enforced, the consumers are likely to incur significant additional monetary as well as non-monetary costs. The monetary costs will be on account of high fares of available modes of transport. Non-monetary cost is the additional amount which the consumer is likely to be willing to pay to avoid travelling through inconvenient modes like buses and B/Y taxis.

<table>
<thead>
<tr>
<th>Rule</th>
<th>Average daily cost to consumer in baseline</th>
<th>Increase in daily cost to consumer under the Rules</th>
<th>Increase in cost (%)</th>
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</thead>
<tbody>
<tr>
<td>Minimum Engine Capacity</td>
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<td>PSV badge</td>
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</tbody>
</table>

2. Drivers linked with app based aggregators

If the Rules are enforced, the drivers linked with app based aggregators are likely to be negatively impacted, when taken together. For instance, if the fleet composition requirement is adopted, the aggregate costs to drivers with engine capacity above 980 CC are likely to increase by around 93 percent from INR 1500 to INR 2899.01.

Similarly, in case the minimum engine capacity rule is adopted, compact hatchback taxis (having engine capacity below 980 CC) will need to exit the market. Further, it may not be possible to operate such taxis under AITP on inter-city routes. Consequently, owners of such taxis would be required to forego the income from city taxi services while not having alternative avenues to deploy the vehicle. Owing to increase in demand, taxis with engine capacity above 980 CC are likely to experience positive impact.
3. Other modes of transport

If the Rules are enforced, alternatives to taxis linked with app based aggregators, i.e. B/Y taxis and A/C buses are likely to witness increase in demand, and consequent increase in income.

<table>
<thead>
<tr>
<th>Rule</th>
<th>Average daily income of B/Y taxi</th>
<th>Increase in average daily income of B/Y taxi</th>
<th>Increase in income (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Engine Capacity</td>
<td>2,000</td>
<td>122.23</td>
<td>6.11</td>
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<td>Fleet Composition</td>
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<td>2,000</td>
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</table>

4. Aggregate impact

In aggregate, the Rules are likely to negatively impact the stakeholders, when taken together.

*Figures in INR per day*

<table>
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<th>Rules/Stakeholders</th>
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Executive Summary

Background

It has been estimated that by 2030, cities across the world will cater to approximately 6 billion people as compared with approximately 3.6 billion today. This comprises approximately 66 percent of the world’s population. Likewise, Indian cities are estimated to cater to approximately 38 percent of the country’s total population. It has been projected that India’s urban population will reach 0.6 billion people by 2030, twice the size of the United States of America.

Increase in pressure on cities has resulted in expansion of urban sprawl, consequently increasing the average commute distances for its inhabitants. The increase in average daily commuting time augments the need for point to point or intermittent public transport (IPT) and results in an increase in the demand for motor-vehicles.

This increase in demand has led to emergence of new business models and technologies such as app based aggregators which connect drivers of cars to potential consumers. Such aggregators serve the rising urban consumer base, which hitherto remained underserved by traditional service providers. For instance, the need for IPT in cities like Mumbai has been traditionally met by the Black and Yellow (B/Y) taxis. No new B/Y taxi permits were issued since 1997 until recently. This has resulted in imbalance between demand and supply of taxis, which is largely being catered by app based aggregators since last few years.

However, the advent of such technology enabled innovative services do not often fit within the policies designed to regulate the services offered by traditional service providers. Consequently, regulators in different Indian states have been attempting to achieve regulatory convergence between different business models. Many states such as Rajasthan, West Bengal, Karnataka and Maharashtra have taken initiatives to regulate taxis linked with app based aggregators.

The curious case of Maharashtra

While the rules issued in Rajasthan, West Bengal and Karnataka have come into force, the Maharashtra City Taxi Rules, 2017 (Rules) are yet to be enforced. Further, several commuting options are available in a city like Mumbai, which is epitome of urban

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2 Ejaz Ghani, The smart cities project must promote diversity, LiveMint, 21 May 2018, at https://www.livemint.com/Opinion/XENew1uWdeGx6PQv9tIcMK/The-smart-cities-project-must-promote-diversity.html
3 Urban sprawl refers to the expansion of poorly planned, low-density, auto-dependent development, which spreads out over large amounts of land, putting long distances between homes, stores, and work and creating a high segregation between residential and commercial uses with harmful impacts on the people living in these areas and the ecosystems and wildlife that have been displaced. http://www.everythingconnects.org/urban-sprawl.html
4 http://iihs.co.in/knowledge-gateway/wp-content/uploads/2015/07/RF-Working-Paper-Transport_edited_09062015_Final_reduced-size.pdf, “As populations increase, the average travel distances as well as intensity are expected to increase as there is a direct correlation between the two indicators. Average trips lengths for metro cities including Bengaluru are over 8 km, while it is 6 km or less for all other metro cities. This trend in trip length and frequency is only expected to increase with increasing income levels, migration, participation of women and a service-oriented economy. As more people travel over longer distances on regular basis for employment and education purposes, will inevitably lead to road congestion.”
5 Available at https://transport.maharashtra.gov.in/Site/Upload/Pdf/mahacts17%20.pdf, accessed on 15th December 2017
sprawling in India. Thus, a closer look at interaction between users and providers of IPT services in Mumbai is expected to offer unique insights. The Rules were issued to regulate the licensing of taxis linked with mobile apps of taxi aggregators. The Preamble to the Rules states that a large number of such taxis have been operating with the All India Tourist Permits (AITP) albeit essentially operating as city taxis. It further highlights the difference in regulation of city taxis and taxis operating with AITPs in cities of Maharashtra, and calls for regulatory convergence. As per the Preamble, the Rules intend to retain the advantages of app based taxis, viz. efficient demand/supply matching, dynamic price discovery, better commuter experience and upgradation/modernisation of taxi services.

**Approach & Methodology**

Any proposed regulation can impact different stakeholders in varied and divergent manner. It is essential to ensure that costs of regulations are outweighed by their benefits. Regulatory Impact Assessment (RIA) is a process of systematically identifying and assessing direct and indirect costs and benefits of regulations on different stakeholders.

RIA is an important element of an evidence-based approach to policy making and review, as it essentially comprises robust and structured stakeholder engagement. Impacts of different regulatory options are compared with ‘as is’ scenario on the basis of scientifically developed tools such as cost-benefit analysis, cost-effective analysis etc. and thus the best possible regulatory intervention is selected, which has the potential to result in maximum net benefits. RIA essentially answers the following questions:

<table>
<thead>
<tr>
<th><strong>RIA Answers</strong></th>
</tr>
</thead>
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<td><strong>What is the problem being solved, and why did it emerge?</strong></td>
</tr>
<tr>
<td><strong>What will happen if the government does not act?</strong></td>
</tr>
<tr>
<td><strong>What kinds of actions could be envisaged to address the problem?</strong></td>
</tr>
<tr>
<td><strong>What are the consequences of possible actions?</strong></td>
</tr>
<tr>
<td><strong>Why is the proposed solution the best one? Does it best solve the problem by achieving maximum net benefit?</strong></td>
</tr>
<tr>
<td><strong>Can the government implement the solution effectively?</strong></td>
</tr>
</tbody>
</table>

**Scope of the Report**

This report presents findings of a limited RIA exercise conducted by CUTS International on select provisions of the Rules. This involved assessment of costs and benefits of such provisions, and estimation of the net impact on different stakeholders. Broad suggestions with the intention of reducing costs and enhancing benefits are also provided.

Six specific provisions were identified for the purpose of in-depth cost-benefit analysis. The relate to: i) minimum engine capacity ii) fleet composition, iii) permit fees; iv) fuel type; v) Public Service Vehicle (PSV) badge; and vi) colour standardisation. These provisions were selected as they are likely to have direct and substantial impact on taxi drivers and consumers, and can provide a broad idea of aggregate impact of the Rules. Due regard was also given to interest and expertise of CUTS International and available resources.

The exercise was informed by robust primary research in form of interactions with 1000 drivers and 1000 users of city taxi services in Mumbai Metropolitan Region (MMR). Of
1000 drivers interviewed, 750 drivers were associated with app based taxi aggregators while remaining 250 drivers drove black and yellow taxis. The exercise also involved in-depth interaction with different relevant stakeholder groups including government, experts, consumer representatives, taxi union representatives, academia, among others, to understand their perspective on the Rules. An attempt has been made to estimate quantitative and well as qualitative costs and benefits of the Rules on different stakeholders such as consumers, taxi drivers, government and aggregators.

The provisions analysed under the study and related findings have been discussed below:

**Minimum Engine Capacity**

**Regulatory Proposal:** Taxis attached to any aggregator should have minimum engine capacity of not less than 980 CC.

**Objective:** Ensuring adequate comfort for consumers and create a level playing field between B/Y taxis and taxis linked with app based aggregators. Currently, B/Y taxis are required to have a minimum engine capacity of 980 CC.

**Baseline Scenario**

**Impact Assessment:**

1. Taxis with engine capacity less than 980CC (compact hatchback taxis) are likely to exit the market, adversely impacting such drivers.

2. Consumers are likely to shift to AC buses, hatchback taxis and B/Y taxis, positively impacting such drivers, and negatively impacting the consumers.

3. In case consumers shift to AC buses, while the actual fare will reduce, consumers will bear inconvenience, to avoid which they will be willing to pay higher fare.

**Recommendations**

Better alternatives to ensure consumer safety and comfort, such as prescribing power to weight ratio, should be explored, while undertaking cost benefit analysis. The restriction on minimum engine capacity should be rationalised to allow taxis with engine capacity of 600 CC and above to link with app based aggregators.
Fleet Composition

**Regulatory Proposal:** At least 30 percent of taxis linked with app based aggregators must have engine capacity of 1400 CC and more (SUV taxis).

**Objective:** Facilitating optimal competition between high end taxis operating under Previous Taxi Schemes and similar taxis linked with app based aggregators.

**Baseline Scenario**

86% drivers revealed that existing fleet composition in line consumer demand

Drivers of taxis with engine capacity more than 1400 CC felt that government should not decide fleet composition

96% consumers stated that there is no shortage of SUVs while booking app based taxis

**Impact assessment**

Following are the likely scenarios if fleet composition requirement comes into force:

In all scenarios, the demand for taxis with engine capacity less than 1400 CC (as projected in normal growth scenario) is likely to outstrip their supply. Similarly, in most scenarios, the supply for taxis with engine capacity more than 1400 CC is likely to outstrip their demand (as projected in the normal growth scenario).

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6 Currently, high end taxis with engine capacity of 1400 CC and more are predominantly operated under the Fleet Taxi Scheme, 2006, Phone Fleet Taxi Scheme, 2010, and Call Taxi Scheme 2010.
• Consumers who are unable to find taxis with engine capacity below 1400 CC are likely to shift to AC buses, SUV taxis and B/Y taxis, positively impacting such drivers. However, given that supply of SUV taxis will outstrip the demand, such drivers will be negatively impacted.

• In case consumers shift to AC buses, while the actual fare will reduce, consumers will bear inconvenience, to avoid which they will be willing to pay higher fare.

• Government will collect permit and fees owing to increase in number of SUV taxis.

Recommendations
The minimum fleet capacity requirement should be removed. A periodic market analysis should be conducted to assess if supply of taxis is corresponding to demand and artificial barriers are present. Also, a market for tradeable fleet composition certificates could be created wherein aggregators who link more than desired number of taxis should be in a position to sell the certificates to aggregators who are unable to do so.

Permit & Fee
Regulatory Proposal: Taxis attached to any aggregator will be required to obtain a permit called the App Based City Taxi Permit (ABCTP) by paying prescribed fees (and taxes). Currently, taxis linked with app based aggregators are operating with All India Tourist Permit (AITP).

<table>
<thead>
<tr>
<th>Taxis</th>
<th>Permit fee (AITP)</th>
<th>Permit fee (ABCTP)</th>
<th>Taxes (AITP)*</th>
<th>Taxes (ABCTP) **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hatchback taxis (INR)</td>
<td>1,500</td>
<td>25,000</td>
<td>8,000</td>
<td>7,150</td>
</tr>
<tr>
<td>SUV Taxis (INR)</td>
<td>1,500</td>
<td>2,61,000</td>
<td>12,000</td>
<td>7,150</td>
</tr>
</tbody>
</table>

*Annual. All others figures are one time. **Assumption. As B/Y taxis are subject to this.

Objective: Creation of a level playing field between the incumbent B/Y taxis and SUV taxis and corresponding taxis linked with app based aggregators.

7 The probability of a consumer finding a taxi with engine capacity less than 1400 CC differs in each of the scenario.
Baseline Scenario

30% permits previously auctioned for high end taxi service remained unacquired

Almost all drivers associated with aggregators possess AITP and a substantial proportion are not willing to surrender the permits

Consumers care about safety and comfort and not about type of permit driver possesses

Impact Assessment

- The cost of operations for drivers is likely to increase. Those drivers who will be unable to afford the higher fee requirement may exit the market, thus adversely impacting their revenue. This may result in increase in fare for consumers.
- The government is likely to collect higher revenue.
- The request may result in achieving the regulatory objective, however, the same is likely to happen at prohibitively high costs.

Recommendations

Taxis with AITPs should be permitted to operate under the Rules without surrendering their existing permit. The permit fee should be decreased for all types of taxis and should be nominal and uniform. Fee paid under different rules should be set off from the permit fee applicable under the Rules.

Public Service Vehicle (PSV) Badge

**Regulatory Proposal:** A driver is required to have a valid commercial driving license to drive a taxi and a valid PSV Badge issued by the licensing authority. To obtain PSV badge, one should have state domicile, topographical knowledge of area of operation and working knowledge of Marathi.

**Objective:** To ensure that the passengers are not inconvenienced, and local employment is promoted.

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8 Residence in Maharashtra for 15 years
**Baseline Scenario**

- 32% drivers of taxis linked with app based aggregators are not eligible to apply for PSV Badge
- Many taxis remain unoperational owing to unavailability of drivers fulfilling domicile condition
- Most drivers are reasonably familiar with local language and topography

**Impact Assessment**

- Drivers eligible for obtaining PSV badge will invest necessary resources to obtain it.
- Drivers who are not eligible will be adversely impacted. For instance, ineligible drivers-owners of taxis with engine capacity less than 980 CC will have to leave the market and might not even be in a position to operate the taxi with AITP, resulting in significant loss.
- The government is likely to benefit owing to the collection of fee to issue PSV badge.
- A reduction in number of taxis will force consumers to shift to other options, thus creating inconvenience and increased costs. This may benefit drivers of such alternate modes of transport.

**Recommendations**

Mandatory conditions such as permanent residence of Maharashtra result in artificial restrictions on employment. These conditions need to be avoided while job creation and entrepreneurship should be promoted. Further, the requirement of PSV Badge can be replaced with conditions like Aadhaar number, residential address proof, and contact details of two family members (akin to the procedure in other states), to ensure authenticity of drivers. This relaxation should be provided to incumbent taxi service providers as well.

Further, consumers appreciate if drivers have reasonable awareness of topography and local language. Most drivers already meet such condition. Consequently, the condition for drivers to have reasonable awareness of topography and local language may be retained. However, the process of certification should be proportional and should not create artificial barriers. Any rejection on these grounds should be in writing and with adequate reasons. Proportional certification requirements should be ascertained through a robust stakeholder consultation process. In addition, monitoring and supervision of drivers should be improved. Efforts for speedy grievance redress need to be made.
Need to Operate Taxis on Clean Fuel

**Regulatory Proposal:** A taxi registered under the Rules is required to be driven on clean fuel. Such vehicle should meet emission standards as prescribed from time to time by the Transport Authority. If the services of any working taxi operating under some valid permit are intended to be offered through any aggregator, then the said taxi is required to convert to be driven on clean fuel, within one year from commencement of the Rules.

**Objective:** All incumbent city taxis operate on clean fuel. Therefore, the intention is to create a level playing field between the incumbent taxis, and the taxis linked with app based aggregators, and benefit environment.

**Baseline Scenario**

- 77% drivers of diesel taxis expressed inability to convert/change their taxis
- 89% drivers of diesel taxis opined that taxis are not the major source of pollution
- 85% drivers of diesel taxis agreed to such rule being implemented during 3-5 years

**Impact Assessment**

- The owners of taxis operating with diesel fuel will need to invest resources to convert diesel assembly into petrol/ CNG assembly. The taxi owners will need to bear such costs, which is likely to be passed on to consumers. If such conversion is not possible, taxi owners will need procure new taxis with clean fuel. This will increase cost to taxi owners, and consequently consumers.

- Operation of taxis with clean fuel is expected to positively impact the environment.

**Recommendations**

Instead of regulating type of the fuel, government may regulate emission standards. This is likely to promote innovation and benefit environment. Also, taxis operating with clean fuel may be incentivised. The transition period to comply with clean fuel requirement must be reviewed and decided based on consultation with relevant stakeholders. For instance, the taxis may be replaced after the existing permit expires by natural efflux of time, which is also in line with the judgement of Supreme Court in the National Capital Region (NCR) for a similar issue. The Government should provide adequate support to taxi drivers to manage the transition, and focus on improving the CNG infrastructure in the city.

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9 Clean Fuel - Unleaded petrol or CNG or LPG or Hybrid or Electrical
**Colour Standardisation**

**Regulatory Proposal:** All taxis operating under ABCTP shall be painted as specified below:

<table>
<thead>
<tr>
<th>Vehicle specifications</th>
<th>White Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front and rear bumper of vehicle</td>
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</tr>
<tr>
<td>Lower side of the vehicle</td>
<td>Daffodil Yellow Colour</td>
</tr>
</tbody>
</table>

**Objective:** To make it easy for commuters to identify taxis at locations with large number of vehicles moving at any point of time, while creating level playing field between different taxi operators.

**Baseline Scenario**

- 48% of users opined that standard colour of taxis may not impact ease of locating taxis.
- 64% of drivers thought that there would be no benefit associated with standardised colour.
- 87% users found it easy to locate their booked taxi in a crowded location.

**Impact Assessment**

- The drivers will incur extra costs in getting the taxis repainted. Further, drivers may not be able to earn additional revenue through advertisement, due to limited space available after the repaint. This may increase cost of operations without increasing revenue.
- The cost incurred by drivers may be passed on to the consumers resulting in increase in fares.

**Recommendations**

The colour standardisation requirement can be done away with, and if there is a need to differentiate taxis from other vehicles, a sticker of the name of aggregator, or the logo of such aggregator at all sides of the taxis should suffice.
**Aggregate Impact**

The table below presents the aggregate impact and highlights that different Rules impact diverse stakeholders in divergent manner. For instance, while B/Y taxis are likely to be positively impacted by the Rules owing to likely increase in demand, compact hatchback taxis are expected to be severely negatively impacted owing to likely exit from the market. Further, while the Rule on minimum engine capacity may positively impact hatchback taxis on account of increased demand, the Rule on clean fuel and colour standardisation is likely to negatively impact such taxis. In aggregate, the Rules are likely to negatively impact all stakeholders taken together.

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   If the Rules are enforced, the consumers are likely to incur significant additional monetary as well as non-monetary costs. The monetary costs will be on account of high fares of available modes of transport. Non-monetary cost is the additional amount which the consumer is willing to pay to avoid travelling through inconvenient modes like buses and B/Y taxis.
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If the Rules are enforced, the drivers linked with app based aggregators are likely to be negatively impacted, when taken together. For instance, if the fleet composition requirement is adopted, the aggregate costs to drivers with engine capacity above 980 CC are likely to increase by around 93 percent from INR 1500 to INR 2899.01.

Similarly, in case the minimum engine capacity rule is adopted, compact hatchback taxis (having engine capacity below 980 CC) will need to exit the market. Further, it may not be possible to operate such taxis under AITP on inter-city routes. Consequently, owners of such taxis would be required to forego the income from city taxi services while not having alternative avenues to deploy the vehicle. Owing to increase in demand, taxis with engine capacity above 980 CC are likely to experience positive impact.

3. Other modes of transport
If the Rules are enforced, alternatives to taxis linked with app based aggregators, i.e. B/Y taxis and A/C buses are likely to witness increase in demand, and consequent increase in income.

<table>
<thead>
<tr>
<th>Rule</th>
<th>Average daily income of B/Y taxi</th>
<th>Increase in average daily income of B/Y taxi</th>
<th>Increase in income (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Engine Capacity</td>
<td>2,000</td>
<td>122.23</td>
<td>6.11</td>
</tr>
<tr>
<td>Fleet Composition</td>
<td>2,000</td>
<td>27.87</td>
<td>1.39</td>
</tr>
<tr>
<td>PSV badge</td>
<td>2,000</td>
<td>128.67</td>
<td>6.14</td>
</tr>
</tbody>
</table>

Way Forward
As indicated earlier, different regulatory proposals can impact diverse stakeholders in divergent manner. Consequently, there is a merit in beginning to think about costs and benefits of regulatory proposals prior to their adoption and assessing whether the regulatory objectives are likely to be met at minimum costs.

This holds true in case of Rules as well. It may be useful to consider alternatives to some of the provisions of the Rules, estimate their impacts and examine if such alternatives are likely to meet the regulatory objectives at lesser costs, than those likely to be imposed by the Rules. Some alternatives have already been discussed elsewhere.

It must also be noted that several incumbent city taxi providers are already subject to provisions similar to Rules (such as PSV badge, minimum engine capacity, clean fuel) and are incurring significant compliance cost. In fact, one of the rationale for introduction of the Rules was to create level playing field between incumbent city taxi providers and taxis linked with app based service providers. A level playing field may not necessarily be achieved by increasing the costs of new market entrants to match the costs of incumbents but can also be created by reducing the costs of incumbents to match the costs of new entrants. In other words, there is a need to revisit the regulatory framework for incumbent city taxi providers and ensure they are subject to reasonable and proportionate regulatory requirements which are likely to achieve the regulatory objectives at least costs to such incumbents.

However, reforming specific existing regulatory provisions may not necessarily ensure that similar regulatory frameworks will not be issued in future wherein costs may
outweigh benefits. Thus, there is a need to reform the regulation making process and institutionalise the process of considering impacts of regulatory proposals in advance.

RIA serves this purpose. To ensure the adoption of RIA in the regulatory process, political will is necessary. Various expert committees and independent studies\textsuperscript{10} have already recommended adoption of RIA in India. These include erstwhile Planning Commission’s Working Group on Business Regulatory Framework (WGBRF) (2011)\textsuperscript{11}, Financial Sector Legislative Reforms Commission (FSLRC) (2013), Committee for Reforming the Regulatory Environment for Doing Business in India (2013), Tax Administration and Reforms Commission (2015), and the Department of Industrial Policy and Promotion’s Expert Committee on Prior Permissions and Regulatory Mechanism (2016).

More recently, the Ministry of Commerce & Industry, Government of India has constituted a Better Regulation Advisory Group with the objective of improving regulatory processes. A sub-group consisting of CUTS International and Federation of Indian Micro and Small and Medium Enterprises (FISME) was tasked to suggest a mechanism for adoption of RIA in India, for ministries and regulators under the Central Government to improve regulatory processes.\textsuperscript{12}

Moreover, to enable institutionalisation of RIA, training and capacity building of relevant government institutions to undertake in-depth RIA would be required. Building such capacity and conducting periodic RIAs would put significant strain on exchequer. However, the consequent benefits of improved regulatory governance and imposition of minimal costs on stakeholders to achieve regulatory objectives are expected to outweigh the costs of institutionalisation and conducting RIA.

\textsuperscript{10}CUTS projects on Regulatory Impact Assessments in India are available at \url{http://cuts.ccier.org/ria/}  
\textsuperscript{11}to which CUTS acted as a Knowledge Partner  
\textsuperscript{12}\url{http://pib.nic.in/newssite/PrintRelease.aspx?relid=176264}