



## Taxation Policy: A Much-Needed Push for Intellectual Property Creation in India

M Sakthivel<sup>1†</sup>, Anjali Agrawal<sup>2</sup> and Shiv Singhal<sup>3</sup>

<sup>1</sup>University School of Law and Legal Studies, GGSIP University, Delhi-110 078, India

<sup>2</sup>High Court of Delhi, Delhi-110 003, India

<sup>3</sup>J Sagar Associates, Gurgram-122009, Haryana, India

Received: 2<sup>nd</sup> March 2022

Tax is one of the sources of funds for the State to be able to provide public goods. Tax policy has also been strategically exploited by the State to achieve desired social interventions and developments. In the modern era, such social development is driven in large part by the growth of intellectual property. Each State strives to achieve an edge over other states through intellectual property. India is no exception and is striving to incentivize the creation of IP *via* the tax system. In this paper, the authors establish how both tax policy and a robust intellectual property regime have led to the development of the country. The authors have carried out a brief comparative analysis of the tools used by Singapore in their taxation policy which have resulted in the growth of intellectual property. The paper briefly analyses the various tools used by India in its taxation policy for the promotion of intellectual property and their likely impact on India's aspiration to become self-reliant and globally competitive in the sphere of intellectual property.

**Keywords:** Intellectual Property, IP Development, Tax Policy, Research and Development, Economic Development

*“Taxation is one of the most important ways in which developing countries can mobilise their resources for sustainable development. It supports the basic functions of an effective State – enabling it to raise the resources needed to deliver essential services – and creates the context for economic growth. At the same time, it is a catalyst for governments that are more responsive and accountable to their citizens and for expanding State capacity.”<sup>1</sup>*

The tax environment of a particular country is important both to the State and to investors. For most countries, taxation is the major source of revenue which allows the State to invest in various public utilities for the welfare of the people; for investors, tax is an expense. Thus, from the perspective of investors, the tax policy of a State should be conducive to business and not become an intolerable burden. A good tax policy will help a State in achieving the Sustainable Development Goals (SDGs), especially Target 17.1<sup>2</sup> which is strengthening resource mobilisation.<sup>3</sup>

Studies on employment growth, investment growth, and firm location all consider the business

climate in general, but a major factor is the taxation policy of the State.<sup>4</sup> All States would want businesses to be set up in their territory and use tax policy to attract them. Apart from this, tax policy also looks at fostering economic growth. Thus, a well-planned and well-executed tax policy is a must for a State that intends to have business activities for growth.<sup>4</sup>

Businesses also see how the State spends the taxpayers' money. If the expenses made by the State are in consonance with the business' objectives, an investor may not mind paying taxes at a higher tax rate. Thus, apart from the tax rates, an investor may also look at where the amount collected *via* tax is spent by the State.<sup>4</sup>

The Indian Constitution lays down distributive justice as one of the goals of the Union of India. One way of achieving these goals is through the fiscal social contract,<sup>5</sup> which has two components: *first*, the engagement of citizens regarding the raising and spending of public revenue and *second*, their acceptance of the obligation to pay taxes in order to be entitled to the benefits of public expenditure.

Keeping in mind the diversity in the availability of resources in India, one shoe fits all policy will not be beneficial. Different incentives in terms of taxation are required for various regions as well as various

<sup>†</sup>Corresponding author: Email: msakthi1985@gmail.com

sectors which can promote business. Although tax incentives result in a cut in revenue mobilization of the State, it is compensated by increased business activities, employment generation, and thereby economic growth of the nation. Tax policies, if applied rationally, can become a tool for the State to achieve desired socio-economic results.

In India, tax policies have been used to achieve desired socio-economic impacts. India's experiments with using tax policies as a tool for development have rendered desired results in various fields. Direct tax incentives have been provided for '*promotion of exports, balanced regional development, creation of infrastructure facilities, employment, rural development; scientific research and development, encourage savings by individuals and donations for charity.*'<sup>6</sup> Depreciation at an accelerated rate has also been provided as an incentive for capital investment.

The Indian Government gave direct tax incentives to industries for setting up businesses in the backward districts of India. This attracted many industries to set up their units in such backward districts, which have resulted in a significant improvement in the standard of living as well as economic activities in such districts. Furthermore, in 2020, numerous tax benefits in the form of exemptions and rebates were provided to Micro, Small and Medium Enterprises (MSMEs) to enable them to survive the severe COVID-19 pandemic.

The National Institute of Public Finance and Policy<sup>7</sup> analysed the following broad questions in relation to the tax incentives<sup>8</sup> provided to start commercial production in a particular state: (a) Whether the states that were incentivized grow at a faster pace from their previous growth rate? and (b) Whether there was a diversion of investment and economic activity from the neighbouring non-incentivized states to the incentivized states resulting in diversion rather than new investment? The study on these questions concluded as follows: (a) Expansion in the economic activity was evident in the incentivised states in terms of increase in both their share in total output and capital employed; and (b) Not much evidence was found to conclude that there was a shifting of economic activity from the neighbouring non-incentivized states to the incentivised states as the total level of economic activity did not decrease on an overall basis in both these states.

Intellectual property (IP) is one of the key indicators for the economic development of a nation.

In the globalized and digitized world, many businesses compete with competitors internationally. To have an edge in the market, for a business enterprise, it is not sufficient to have financial capital; it is equally important to have intellectual capital in the form of intellectual property. Intellectual property being held by a business enterprise and its incessant efforts and investments to create a more and more intellectual property will decide the sustainability of a business enterprise in the competitive global market. In other words, the sustained economic growth of a country will be determined by the IP generation of its business enterprise. Therefore, States should design its policies that promote intellectual property generation. As taxation policies are a well-understood tool for furthering general economic objectives, it is prudent to use taxation policies as a tool for promoting the creation of intellectual property.

### **Tax and IP as a Tool for Innovation and Development**

Studies have found an overall positive and significant effect of the R&D tax credit scheme on a firm's R&D expenditure.<sup>9</sup> In one OECD study,<sup>10</sup> it was confirmed that R&D tax incentives have a significant impact on business R&D and one unit of tax incentive in R&D is associated on average with around 1.4 units of investment in R&D. In the context of Europe, the data of patent applications to the European Patent Office between 1995 and 2007, it has been found that low tax rates on income from patent increases average patent quality.<sup>11</sup> An increase in patent quality of around 1 to 5% was observed for a decrease in the income tax rate on patents by 10%.<sup>12</sup> These indicate that the R&D tax incentive can be used as an effective tool for enhancing R&D in India.

Thus, there is a need to incentivise innovation in India by providing tax incentives amongst other incentives to R&D activities. By investing in R&D activities, India can increase the likelihood of generating IP in the form of patents, designs, plant variety, copyright, semiconductors, etc. Thus, by providing incentives to R&D activities in India, there will be IP creation. However, it is important to note that such R&D activities may not have any impact on certain IP such as traditional knowledge and geographical indication. In the case of these two, there is a need to invest in cataloguing these IP and creating a database. Thus, investing in R&D and cataloguing traditional knowledge and geographical indication

will help India become a knowledge-based economy. India has taken various measures for promoting R&D activities in the country through taxation under its direct tax laws<sup>13</sup> and indirect tax laws.<sup>14</sup> Broadly, these tools are:

- (i) *Exemption*- Specific form of an income or a transaction is exempted from the purview of taxation<sup>15</sup>;
- (ii) *Deductions* - Actual or notional expenditure is allowed to be deducted in the computation of income or valuation of a transaction sought to be taxed<sup>16</sup>;
- (iii) *Tax Credits* - Credits are provided to reduce the tax liability on undertaking prescribed operations;
- (iv) *Tax Rate Reduction* - It can be provided in form of:
  - reduction for priority sectors<sup>17</sup>
  - the rate structure (surcharges and number of brackets)<sup>18</sup>
  - the neutrality to inflation;<sup>19</sup>
- (v) *Tax Holidays* - Tax is exempted for a specified number of years on undertaking specific obligations;<sup>20</sup> and
- (vi) *Tax Deferral* - Tax liability is deferred when higher deductions are allowed by claiming an allowance, such as depreciation, over a short period of time, however, the same allowance's claim is spread over a number of years in the taxpayer's book of accounts.

The taxation laws in India provide certain incentives for R&D activities that take place in the territory of India. The said incentives may be broadly classified into two categories, namely (i) incentives for the generation of IP assets and (ii) incentives given to the income generated from IP assets. The important provision of the Income Tax Act (ITA), which provides incentives for the first category is Section 35. Section 35 of the ITA provides a deduction for the expenditure incurred for scientific research and

also incentivizes donations that support research activity. Section 35 covers various deductions available to a taxpayer on contribution for scientific research in this regard (Table 1).

Service Exports from India Scheme, provided under the Foreign Trade Policy 2015-2020,<sup>21</sup> grants Duty Credit Scripts as a reward for the supply of notified services from India to any other country at the prescribed rates. The scripts can be used to pay custom duty and additional custom duty on the import of inputs, amongst others. For the 2018-2019 financial year, the list of notified services included R&D services<sup>22</sup> and granted rewards of 7% of 'Net Foreign Exchange earnings',<sup>23</sup> while for 2019-2020 financial year, it was 5%.<sup>24</sup>

One such incentive under the second category is Section 80RRB of the ITA, which provides for deduction of royalty income earned on patents. The other such provision is Section 115BBF of the ITA. Under Section 115BBF, royalty income of a patentee, who is resident in India, is subject to concessional tax rate of 10% (increase by applicable surcharge and cess) when such royalty income is in respect of a patent developed and registered in India. This concessional tax rate for income from patents is commonly referred to as the 'Patent Box'.

The effect of Section 35 of the ITA on R&D activities may be understood by considering the deductions taken by companies under the provision over a period of time. In other words, the impact of this tax incentive, a form of revenue foregone by the Government, on R&D activities as compared to the total revenue foregone by the Government for all the incentives provided in the IT Act (Table 2 & Fig. 1).

It is evident from the deduction for research as a percentage of the total revenue foregone by the Government that there was a sudden increase in the utilisation of the R&D tax incentive in 2009-10 and 2010-11 and then in 2012-13 to 2013-14 and a sudden

Table 1 — Deductions under Section 35 of the ITA

Provision	Scope	Deduction available from the assessment year 2020-21
35(1)(ii)	Contribution to an approved 'Research association' or to an approved 'University, college or other institution' for conducting scientific research	100% of actual contribution
35(1)(ia)	Contribution to an approved Indian scientific research company	100% of actual contribution
35(1)(iii)	Contribution to an approved 'research association' or to a 'University, college or other institution' for conducting research in social science/statistical research	100% of actual contribution
35(2AA)	Contribution to an approved National Laboratory, University, Indian Institute of Technology, or to a specified person	100% of actual contribution
35(2AB)	Expenses (incurred by a company) in its approved in-house research facility	100% of actual contribution

Table 2 — Deduction availed under Section 35<sup>25</sup> of the ITA by corporate entities

Assessment Year	Deduction for research (Rs. in crores)	Total revenue foregone by Government (Rs. in crores)	Total revenue foregone (%)
2020 - 2021	6,974.21	103,285.54	6.75%
2019-2020	6,354.63	94,109.83	6.75%
2018-2019	8,094.08	108,113.04	7.486%
2017-2018	6,832.02	93,642.50	7.296%
2016-2017	11,263.91	86,144.82	13.076%
2015-2016	10,107.40	76,857.70	13.151%
2014-2015	8,401.97	65,067.21	12.913%
2013-2014	7,527.10	57,793.00	13.024%
2012-2013	6,447.80	68,720.00	9.383%
2011-2012	5,747.60	61,765.30	9.306%
2010-2011	4,685.00	57,912.00	8.090%
2009-2010	2,416.00	72,881.00	3.315%
2008-2009	2,526.00	66,901.00	3.776%
2007-2008	2,000.00	62,199.00	3.215%
2006-2007	1,554.00	45,034.00	3.451%
2005-2006	2,839.00	34,618.00	8.201%

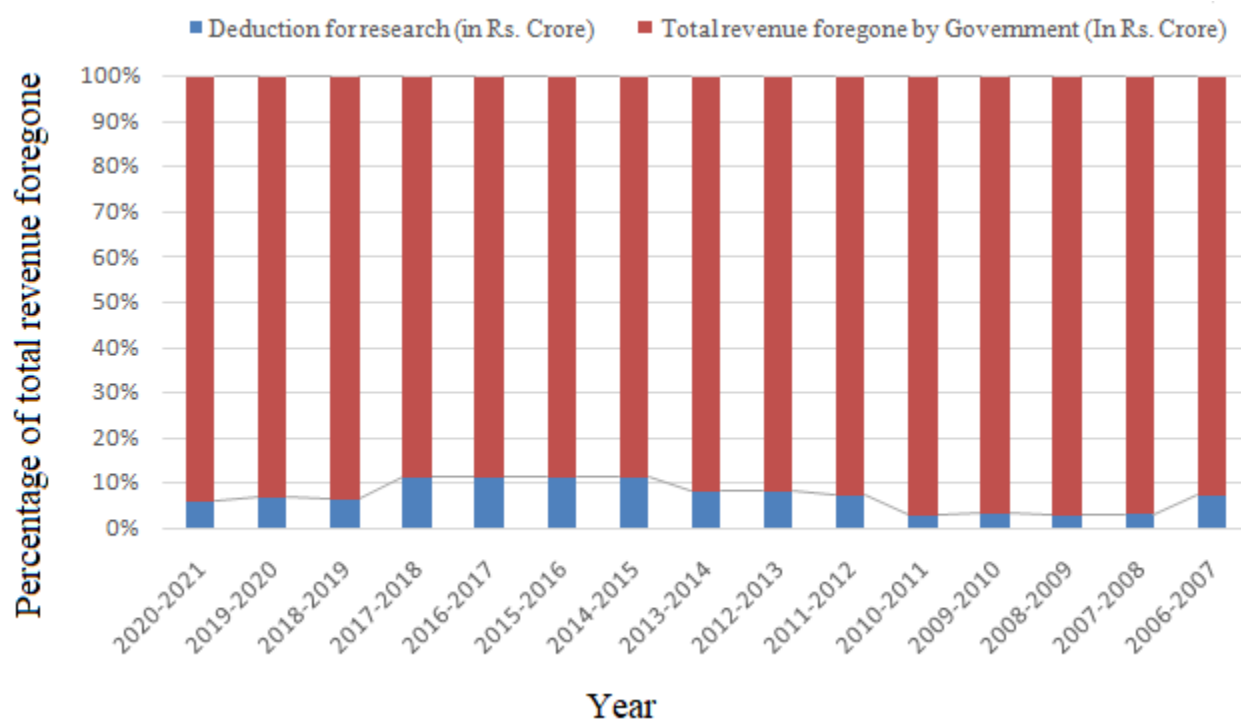


Fig. 1 — Deduction for research as % of total revenue foregone

decrease in 2016-17 and 2017-18. In the view of the authors, one of the factors for these fluctuations is the amendments to Section 35 of the ITA from time to time. To understand the reason for the change in the overall amount of deductions over these years, Table 3 provides the legislative history of Section 35(2AB) of the ITA, and Table 4 provides an

overview of the changes brought by the Finance Act 2016 to other clauses of Section 35 of the ITA.

The perusal of the above legislative history reveals that the drastic change in the tax policies towards the promotion of R&D activities, in turn, generated IP assets. In consonance with change in the tax policies of the Government, the tax incentives being given by

Table 3 — Major changes in Section 35(2AB) - R&D tax incentive for company's in-house research unit		
Finance Act	Change in percentage	Change in scope of weighted deduction availability
1999		Weighted deduction of 125% of the expenditure incurred on scientific research on in-house research and development facility was allowed to a company engaged in the business of manufacture or production of any drugs, pharmaceuticals, electronic equipment, computers, telecommunication equipment, chemicals or any other article or thing notified by the Board. This deduction was available for the expenditure incurred up to 31 March 2000. The time limit was extended to 31 March 2005.
2000	Weighted deduction increased from 125% to 150%	
2005		The time limit was extended by two more years to 31 March 2007.
2007		The time limit extended by five more years to 31 March 2012.
2009 (No. 2)		To promote research and development in all sectors of the economy, the benefit of weighted deduction was extended to companies engaged in the business of manufacture or production of any article or thing except those specified in the Eleventh Schedule of the ITA.
2010	Weighted deduction increased from 150% to 200%	
2016	Weighted deduction decreased from 200% to 150% until 31 March 2020. From 1 April 2020, the weighted deduction decreased to 100%.	

Table 4 — Major changes to Section 35 in Finance Act 2016		
Provision	Weighted deduction before Finance Act 2016	Weighted deduction after Finance Act 2016
35(1)(ii)	Weighted deduction of 175%	Weighted deduction decreased to 150% until 31 March 2020. From 1 April 2020, the weighted deduction decreased to 100%.
35(1)(iia)	Weighted deduction of 125%	Weighted deduction decreased to 100%
35(1)(iii)	Weighted deduction of 125%	Weighted deduction decreased to 100%
35(1)(2AA)	Weighted deduction of 200%	Weighted deduction decreased to 150% until 31 March 2020. From 1 April 2020, the weighted deduction decreased to 100%.

the Government under various provisions of the ITA have been either reduced or withdrawn and the focus has been put on reduced tax rates for business enterprises.<sup>26</sup>

In the context of Section 35 of the ITA, it is relevant to mention that the provision is well-balanced to take care of the capital mobilization for institutions and business enterprises. Clause (ii) and clause (iii) of sub-section (1) of Section 35 of the ITA, as well as Section 35(2AA) of the ITA, are focused on the capital mobilization of the public institutions, educational institutions and other public research organizations that generally functions in a non-commercial manner.

The deduction was instrumental in raising the capital for R&D activities for such institutions from donors. Under the deduction, it is the donors who can claim the deductions against their donations. In the absence of additional weighted deduction from 1 April 2020, there are no incentives for donors, which may significantly impact the capital mobilization of such institutions for R&D activities.

This may adversely affect publicly-funded research activities.

On the other hand, Section 35(2AB) of the ITA considers capital mobilization for business enterprises that are heavily dependent on R&D activities for their growth. Weighted deduction available under Section 35(2AB) of the ITA helped such business enterprises to reduce their tax liability, which in turn allowed them to invest more in R&D. In the absence of weighted deduction from 1 April 2020, the capital available for R&D activities of such business enterprises has to be set apart for paying more taxes, if the business enterprise is not willing to opt for the new concessional tax regimes. This may negatively impact the competitiveness of a business enterprise in a global market.

As India is making efforts to become a self-reliant economy, the emphasis on the creation of intellectual assets is very crucial. In this context, it is felt that it is not only sufficient to provide a protective regime for

intellectual properties, but it is also equally essential to provide a conducive tax regime for the generation of intellectual property.

### **Taking Cues from Singapore**

Many countries are venturing into R&D development through tax incentives. This is seen from the measures and recent initiatives taken by Singapore, Malaysia, the European Union and the United States, amongst others. In this paper, we will discuss the Singaporean experience in detail. Though no single experience can be applied directly to India, it is necessary to understand how India can monetize their strengths the way Singapore did.

Singapore dreams to become the intellectual property hub (IP Hub) of Asia,<sup>27</sup> both in terms of creation and holding. Singapore started its journey to become the IP hub in 2001 when it established an Economic Review Committee to analyse Singapore's comparative advantage and to include a comprehensive development with respect to IP assets. Singapore invested in selective sectors so as to increase the capabilities of SMEs. These sectors included information technology, biotechnology and life science research. The objective of introducing such a measure was to transform Singapore from a manufacturing to a knowledge economy.<sup>28</sup>

Almost a decade later in 2010, Singapore introduced the Productivity and Innovation Credit Scheme, which provided benefits to those who invested in or developed IP in Singapore. The scheme offers incentives in the following areas: registration of IP rights, acquisition of IP rights, R&D activities and investment in approved design projects.<sup>29</sup> The Singaporean Government, apart from providing tax incentives, also has a cash grant fund, the Research Incentive Scheme for Companies,<sup>30</sup> to assist in setting up R&D centres. However, these awards are discretionary and are given to those projects which are considered strategic by the Government.<sup>31</sup>

Under the Income Tax Act of Singapore (Singapore ITA), the first \$100,000 of annual IP protection costs are eligible for a 200% tax deduction, and any amount above the limit is eligible for a 100% tax deduction.<sup>30</sup> This incentive is only applicable to patents, trademarks, designs and plant varieties. The Singapore ITA also

provides the option to write down<sup>30</sup> the IP rights one has acquired on a straight-line basis over a 5, or 10, or 15 years period. Such an allowance is applicable for patents, copyrights, trademarks, registered designs, geographical indicators, integrated circuit layouts, plant varieties and trade secrets or information with commercial value.<sup>31</sup>

A qualifying R&D activity, is an R&D activity that is clear in its objective, is novel or involves a technical risk and is systematic, investigative and experimental in nature is eligible for a deduction of up to 150% and in some cases, even up to 250% for staff costs and consumables.<sup>31</sup> In 2016, around 770 companies claimed enhanced R&D benefits, with SMEs making up about 85% of that total.<sup>31</sup> Another incentive is the pioneer tax incentive, which applies to companies manufacturing approved products or services which contain high technological content.<sup>31</sup> Yet another incentive is the approved royalty incentive which offers reduced or nil withholding tax rate on royalty payments to access advanced technology and know-how.<sup>30</sup>

In addition, Market Readiness Assistance offered by International Enterprise Singapore aims to help Singapore-based companies defray a portion of costs (including IP costs) when expanding outside Singapore. The programme provides funding of up to 70% of costs for eligible activities (capped at S\$20,000 per company per new market from 1 April 2020 to 31 March 2023), including the filing of foreign IP applications.<sup>32</sup>

In line with its Patent Box regime, Singapore initiated the IP Development Incentive (with effect from 1 July 2018) which linked the successful exploitation of IP rights. In consonance with the modified nexus approach advocated by the OECD, Singapore also requires this tax incentive to be linked with R&D investment in Singapore. This particular scheme provides significant tax reductions from the usual corporate rate of 17% to 5%-10% (depending on the investment).<sup>30</sup> However, only patents and copyrights subsisting in software are eligible for this scheme.<sup>33</sup> Similar tax incentives have been incorporated across countries.<sup>34</sup> Table 5 captures the key tax incentives provided in various countries:<sup>35</sup>

Table 5 — Key tax incentives in various countries

Benefits	Brazil	China	South Africa	Japan	Republic of Korea	Thailand	USA
Tax allowance/ Deductions	✓	✓	✓			✓	
Tax Credit				✓	✓		✓
Accelerated depreciation on R&D assets/ capitals	✓	✓	✓				
Reduced tax rates	✓	✓				✓	
Tax holiday							
Tax deferrals							✓
Tax exemptions (Excise & Custom duty)		✓					

## Conclusion

The Economic Survey 2020-21 recognized the need for greater emphasis on innovation for India to reach a higher growth trajectory and become the third-largest economy in the world. The Economic Survey stressed the need to boost gross expenditure on R&D from the current 0.7% of GDP to over 2% to achieve this goal.<sup>36</sup> It is understood that the tax policies, specifically the regimes governing the creation as well as retention of IP assets in India, may need reconsideration for India, especially when India is aspiring to achieve the aims of *Make in India* and *Atmnirbhar Bharat*.

As mentioned above, tax policy as a whole influences growth in the economy. Accordingly, the tax regimes, including direct and indirect, need to work in unison to create and foster an environment for R&D in India. Apart from creating IP in India, the need to retain IP within India is also important. Measures to incentivize the registration of IP in India are also needed. This will ensure that the capital that is invested in the creation of IP provides returns in terms of royalty income. India, as a nation, must reap the benefits of the research undertaken and incentivized in India.

## References

- 1 OECD, Tax Revenues as a Motor for Sustainable Development, *Development Co-operation Report 2014: Mobilising Resources for Sustainable Development* (OECD Publishing 2014), <https://doi.org/10.1787/dcr-2014-11-en> (accessed on 28 February 2022).
- 2 Target 17.1: Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection. Goal 17 | Department of Economic and Social Affairs, <https://sdgs.un.org/goals/goal17> (accessed on 20 June 2021).
- 3 JohannaI, MosqueraV, LesageD&LipsW, Tax and Development: The Link between International Taxation, The Base Erosion Profit Shifting Project and The 2030 Sustainable Development Agenda [2018] UNU Institute on Comparative Regional Integration Studies Bruges.
- 4 WasylenkoM, Taxation and economic development: The State of the Economic Literature, *New England Economic Review*, 1997, 37.
- 5 DFID, Why tax matters for international development and What DFID is doing about it (Department for International Development 2008), A DFID practice paper, <http://www2.ids.ac.uk/gdr/cfs/TaxNews/DfID%20briefing%20-%20Why%20tax%20matters%20for%20international%20development%20-%20JUL-2008.pdf> (accessed on 20 June 2021).
- 6 Receipt Budget 2020-21: Statement of Revenue Impact of Tax Incentives under the Central Tax System: Financial Years 2018-19 and 2019-20, <https://www.indiabudget.gov.in/doc/rec/allrec.pdf> (accessed on 20 June 2021).
- 7 RaoK, TandonS& and MukherjeeS, Corporate tax: A brief assessment of some exemptions, National Institute of Public Finance and Policy 2016, 16/165, <https://nipfp.org.in/publications/working-papers/1752/> (accessed on 20 June 2021).
- 8 Tax incentives in the form of 100 % exemption from excise duty for specified period, 100 % exemption from income tax for specified period which is reduced overtime, amongst others.
- 9 JoseM, SharmaR&DhanoraM, R&D Tax Incentive Scheme and in-house R&D expenditure: Evidences from Indian firm, *Journal of Advances in Management Research*, 17 (2019) 333.
- 10 OECD, The effects of R&D tax incentives and their role in the Innovation Policy Mix - Findings from the OECD MicroBeRD Project, 2016-19, (OECD Publishing) OECD Science, Technology and Industry Policy Papers, 92, <https://doi.org/10.1787/65234003-en> (accessed on 20 June 2021).
- 11 Projected earnings potential and innovativeness in patent quality was constructed from information on various factors including family size of patent, number of forward citations and the number of industry classes.
- 12 ErnstC, RichterK&RiedelN, Corporate taxation and the quality of research and development, *International Tax and Public Finance*, 21(2014)694.
- 13 Such as Income Tax Act, 1961 (ITA) read with its rules, notification and circulars issued thereunder.
- 14 Such as Central Goods and Services Tax Act, 2017 (CGST Act), Integrated Goods and Services Tax Act, 2017 (IGST Act), State Goods and Services Tax Legislations/ Union Territories Goods and Services Tax Legislations (SGST Act/

- UTGST Act) of the respective states and Union territories and Goods and Services Tax (Compensation to States) Act, 2017 (Compensation Act) read with the rules, notifications and circulars issued thereunder.
- 15 Section 10(1) of the IT Act, agricultural income is exempted from income tax.
  - 16 Section 35 of the IT Act, deduction for R&D expenditure.
  - 17 GST rates at 3%, 5%, 12%, 18% and 28% depending on the type of goods and its relationship to the economy.
  - 18 Section 112 of the IT Act, reduced rates for taxation of capital gains. For individuals, the maximum surcharge (37%) is not applicable for income received from dividends. The surcharge is restricted to 15% for such income.
  - 19 Section 48 of the IT Act provides inflation benefit in calculation of capital gains for taxation in certain cases.
  - 20 Section 10AA of the IT Act, tax holiday for units established in Special Economic Zones.
  - 21 The validity of the Foreign Trade Policy 2015-2020 was extended till 30 September 2021, *vide* Notification No. 60/2015-2020 dated 31 March 2021 issued by the Directorate General of Foreign Trade.
  - 22 As per Public Notice No. 07/2015-2020 dated 11 May 2018 (read with Public Notice No. 45/ 2015-2020 dated 5 December 2017). R&D Services includes R&D Services on natural science, R&D Services on social science and humanities and Interdisciplinary R&D Services.
  - 23 As per Para 3.08 (d) of the Foreign Trade Policy 2015-2021, 'Net Foreign Exchange earnings' is equal to Gross Earnings of Foreign Exchange minus Total expenses/ payment/remittances of Foreign Exchange in the Financial year.
  - 24 As per Notification No. 29/2015-2020 dated 23 September 2021, <https://content.dgft.gov.in/Website/dgftprod/4fdc4659-bdc3-47db-ad29-b85066a6cbfe/Notification%20No%2029%20dt%2023%2009%2021-English.pdf> (accessed on 28 February 2022).
  - 25 This includes revenue foregone by way of deductions under Section 35(1), (2AA) & (2AB) of the ITA. This data has been sourced from the annual data provided in the Budget. Efforts were made by the authors to find data separately for individual sub-clauses of section 35 of the ITA. However, only cumulative data was available.
  - 26 The Honourable Minister of Finance in his speech of Budget 2015-2016 highlighted the intention of the Indian Government to the regime of rationalisation and reduction of various tax exemptions and incentive: "97. *We need to match this transformative piece of legislation in indirect taxation with transformative measures in direct taxation. The basic rate of Corporate Tax in India at 30% is higher than the rates prevalent in the other major Asian economies, making our domestic industry uncompetitive. Moreover, the effective collection of Corporate Tax is about 23%. We lose out on both counts, i.e. we are considered as having a high Corporate Tax regime but we do not get that tax due to excessive exemptions. A regime of exemptions has led to pressure groups, litigation and loss of revenue. It also gives room for avoidable discretion. I, therefore, propose to reduce the rate of Corporate Tax from 30% to 25% over the next 4 years. This will lead to a higher level of investment, higher growth and more jobs. This process of reduction has to be necessarily accompanied by rationalisation and removal of various kinds of tax exemptions and incentives for corporate taxpayers, which incidentally account for a large number of tax disputes*" [Emphasis added] Budget Speech 2015-2016, <https://www.indiabudget.gov.in/budget2015-2016/bspeecha.asp> (accessed on 20 June 2021).
  - 27 Update to the Intellectual Property Hub Master Plan (Government of Singapore and Intellectual Property Office of Singapore 2017) [https://www.ipos.gov.sg/docs/default-source/about-ipos-doc/full-report\\_update-to-ip-hub-master-plan\\_final.pdf](https://www.ipos.gov.sg/docs/default-source/about-ipos-doc/full-report_update-to-ip-hub-master-plan_final.pdf) (accessed on 20 June 2021).
  - 28 World Intellectual Property Organization, *IP Asset Development and Management: A Key Strategy for Economic Growth* (WIPO 2003) <https://www.wipo.int/publications/en/details.jsp?id=293&plang=EN> (accessed on 20 June 2021).
  - 29 IRAS- Productivity and Innovation Credit Scheme, <https://www.iras.gov.sg/irashome/Schemes/Businesses/Productivity-and-Innovation-Credit-Scheme/> (accessed on 20 June 2021).
  - 30 GhoshA&FooG, Singapore's Intellectual Property Tax Regime (12 June 2019), [https://journal.isca.org.sg/2019/06/12/singapores-intellectual-property-tax-regime/pugpig\\_index.html](https://journal.isca.org.sg/2019/06/12/singapores-intellectual-property-tax-regime/pugpig_index.html) (accessed on 20 June 2021). Deloitte, Applying for Government Incentives in Singapore (Deloitte), <https://www2.deloitte.com/content/dam/Deloitte/sg/Documents/tax/sg-tax-applying-for-gov-incentives-in-singapore.pdf> (accessed on 20 June 2021).
  - 31 Making Tax-Efficient Use of Your Asset (Intellectual Property Office of Singapore (IPOS)), <https://iposinternational.com/media/IPM-Business-Guides-13-Making-Tax-efficient-Use-Of-Your-Assets.pdf> (accessed on 20 June 2021).
  - 32 Singapore Intellectual Property Law - 2021 Guide | Corporate Services (*CorporateServices.com*) <https://www.corporateservices.com/singapore/ip-protection-in-singapore/> (accessed on 20 June 2021).
  - 33 Incentives & Schemes | EDB, <http://www.edb.gov.sg/en/how-we-help/incentives-and-schemes.html> (accessed on 20 June 2021).
  - 34 OECD, OECD Compendium of Information R&D Tax Incentives, 2020 (OECD Publishing 2020) <https://www.oecd.org/sti/rd-tax-stats-compendium.pdf> (accessed on 28 February 2022).
  - 35 SahaS& and ShawP, *A Review of R&D and Sectoral Incentives in Manufacturing in Industrialised and Emerging Economies: Lessons for "Make in India"* (Research and Information System for Developing Countries 2018) Discussion Paper 233, <https://ris.org.in/sites/default/files/DP%20233%20Sabyasachi%20Saha%20and%20Prativa%20Shaw-T.pdf> (accessed on 20 June 2021).
  - 36 Innovation: Trending up but needs thrust, especially from the private sector (Ministry of Finance, Government of India), *Economic Survey 2020-21* <https://www.indiabudget.gov.in/economicsurvey/> (accessed on 20 June 2021).