

# THIRD-COUNTRY EFFECTS OF EXPORT INCENTIVES

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**Abstract:** Though empirical literature on the effects of export incentives for domestic export is very rich, export incentives' effects for third countries' export have not yet been examined empirically. This paper sheds some light on this issue. According to existing theory, effects of domestic export incentives for third countries' exporters can be both negative (due to increased competition) and positive (due to input-output linkages in global value chains (GVCs)). This study disentangle between these effects empirically by examining how export incentives implemented in Brazil, India and China (BICs) in 2009-2015 affected export of other 18 large emerging markets. Exploiting cross-product and cross-country variation over time, the paper finds that *negative competition effects* of Brazilian, Indian and Chinese export incentives have caused annual drop in export of affected emerging country on average by 0.2, 1.56 and 6.47 percentage points, respectively. On the other hand, the study reveals that due to *positive "GVCs input-output linkages" effects* of Indian and Chinese export incentives, export of affected emerging country has been increasing annually on average by 0.43 and 16.4 percentage points, respectively. Overall, cumulative effects of recent Brazilian and Indian export incentives for other large emerging countries' exports have been negative albeit relatively small (caused on average annual drop in export of affected country by 0.2 and 1.13%, respectively) whereas cumulative effects of Chinese incentives have been positive and rather large (caused on average annual increase in export of affected country by 10%).

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## 1. INTRODUCTION

For a long time one of the main issues in both policy and academic discussion of export incentives and particularly export subsidies has been whether they have significant negative effects for foreign (rival) countries. Earlier strategic trade policy literature (Spencer and Brander 1983; Brander and Spenser 1985; To 1994) conclude that in the world of imperfect competition and without trade in intermediates, export subsidies can help domestic firms to capture market shares of foreign firms in international markets thereby pointing to negative effects of domestic export incentives for foreign/third countries` export. In this study, I refer to such effects as to *negative competition effects*.

However, as Hoekman (2015) notes, once the shift towards global value chains (GVCs) production is considered and linkages within and across value chains must be taken into account, determining the net effects of government export policies becomes more complicated. In particular, domestic sectoral or firm-specific government policies in GVCs world can benefit GVC as a whole including foreign firms/plants, their workers and local communities (Hoekman 2015).

Several theoretical papers (Spencer and Jones 1991; Bernhofen 1997; Ishikawa and Spencer 1999; Lee and Wong 2005) addressed these issues by studying external effects of export incentives in the presence of trade in intermediate goods. In general, these studies conclude that under certain theoretical assumptions and in the presence of input trade, domestic export incentives, particularly export subsidies, can lead to profit/rent-shifting effects to foreign producers (exporters) within common value chains. Overall, based on this literature, we can distinguish between two basic types of such positive effects. The effects of the first type are caused by export incentives targeted at domestic final/processed good and benefit oligopolistic/monopolistic foreign producers of inputs, imported by source country of incentives to be used in production of the

subsidized processed good (Bernhofen 1997; Ishikawa and Spencer 1999). The effects of the second type are induced by export incentives targeted at input and benefit foreign producers (exporters) of processed goods who import and use the subsidized input in exportable production (Spencer and Jones 1991; Lee and Wong 2005). Theoretical explanation of the latter effect is also related to the broader literature on the role of input trade in trade and growth models. In particular, these models predict that firms benefit from international trade through their increased access to previously unavailable inputs (Goldberg et al. 2010). Export incentives targeted at inputs allow foreign firms to lower their costs of production by using better, cheaper, or novel inputs from abroad.

In this study, in addition to *negative competition effects* mentioned in the beginning, I test for the presence of positive effects of the second type (i.e. which are caused by export incentives targeted at inputs) and refer to such effects as to *positive “GVCs linkages” effects*. Testing for positive effects of the first type would require building a separate estimation framework that could count for bilateral trade flows. In my opinion, this is better to accomplish within a separate paper.

To the best of my knowledge, this is the first study, which provides empirical test of the presence of the outlined effects (both negative and positive). In particular, I empirically study effects of export incentives implemented in Brazil, India and China (BIC) in 2009-2015 for exports of other large emerging economies (the set of affected emerging countries include 18 Asian, Latin American and European emerging countries; see Appendix 1). BICs as source countries of export incentives are very suitable for this project, particularly, due to their rather aggressive export promotion policies in recent years (for relevant discussion see Evenett (2015)) and significant role in world trade.

For empirical analysis, I develop a framework to estimate how export incentives implemented in each BIC country affect exports of selected emerging countries. More specifically, in regressions for export at six-digit industry level

(HS6 2007) in the panel of 18 emerging countries in the period of 2009-2015, I control for the number of export incentives in force in Brazil, India and China (separately) at six-digit industry level (as reported) by year and weight them/multiply by indices which reflect similarity of geographical distribution of exports between respective BIC country and respective third/emerging country in respective six-digit industry. This way, I test for the presence of *negative competition effects* coming from BICs export incentives to export of other emerging markets.

I further construct and include parameters to control for *positive “GVCs linkages” effects* coming from BICs export incentives targeted at inputs, which can be imported by third countries and used in their exportable production. In particular, I compute weighted arithmetic means of the number of export incentives in six-digit input industries in force by year in each BIC country with weights measuring potential usage of these inputs in exportable production in respective six-digit industry of respective third/emerging country. Data on export incentives comes from Global Trade Alert (GTA) database of the Centre for Economic Policy Research (CEPR). Other data sources include UN COMTRADE, OECD-TiVA and Bureau of Economic Analysis (BEA).

I find rather convincing evidence that BICs export incentives have had significant *negative competition effects* on exports of other large emerging countries. In particular, according to the results, if additional export incentive targeted at some six-digit industry comes into force in some year in Brazil, India or China, the drop in export of affected emerging country in that industry in that year, on average, is expected to be 0.68, 1.22 or 6.45%, respectively. Overall, according to this study, *negative competition effects* of Brazilian, Indian and Chinese incentives in 2009-2015 on average have led to annual drop in total export of affected emerging country by 0.2, 1.56 and 6.47%, respectively. As can be seen *negative competition effects* of Chinese export incentives are the largest. This goes

in line with a rather vast literature on crowding-out effects of Chinese export (Eichengreen, Rhee and Tong 2007; Athukorala 2009; Hanson and Robertson 2010; Xing 2011; Husted and Nishioka 2013; Flückiger and Ludwig 2015; Jenkins and Edwards 2015).

The evidence on *positive “GVCs linkages” effects* of BICs export incentives for other emerging countries` export is also quite convincing. According to the results, in 2009-2015 *positive “GVCs linkages” effects* of Indian and Chinese export incentives targeted at inputs on average have caused annual increase in total export of affected emerging country by 0.43 and 16.4 percentage points, respectively.

Overall, cumulative effects of Brazilian<sup>1</sup> and Indian export incentives for affected emerging countries` exports have been negative and have caused on average annual drop in total export of affected emerging country by 0.2 and 1.13 percentage points, respectively. Respective cumulative effects of Chinese export incentives, quite the contrary, have been positive and rather large: on average, they have caused annual increase in total export of effected emerging country by around 10%.

*Positive “GVCs linkages” effects* of Chinese export incentives look extraordinary large (38 times larger than positive effects of Indian export incentives). However, this could be somewhat expected considering China`s supreme role in global input trade<sup>2</sup>. There have been prior studies, which similarly conclude that in a world where international fragmentation of production is becoming the key symbol of globalization, the gloomy predictions of the

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<sup>1</sup> I do not find any evidence of *positive “GVCs linkages” effects* of Brazilian export incentives for the whole sample though there is rather convincing evidence of positive effects of Brazilian incentives for exports of Latin American emerging countries, which points to the importance of regional global value chains in this geographical area.

<sup>2</sup> China is the second largest exporter of intermediate goods in the World after USA (with negligible difference). In 2015, Chinese intermediate export equaled to more than 320 billion USD or around 10% of the World intermediate export according to World Integrated Trade Solution (WITS).

implications of increased Chinese competition may be misleading (Athukorala 2009). Athukorala (2009) has shown empirically that China's rapid integration into global production networks has created new opportunities for the other East Asian countries to engage in various segments of the value chain in line with their comparative advantage. Kong and Kneller (2015), separating trade in intermediate goods from trade in final goods, report evidence of a positive relationship between Chinese and its Asian neighbors' exports. Shen and Silva (2018) find that an increase in U.S. exposure to value-added export of China in industries with high degree of downstreamness leads to negative effects on the share of manufacturing employment, while the same is not present in the case of industries with low degree of downstreamness. Results of this study are also in line with the facts described in Wang, Wei and Zhu (2014) that lead to the conclusions that China has evolved from an economy that primarily assembles final goods to an economy that increasingly serves as a source for intermediate products.

The key conclusion of this study is that inevitable *negative competition effects* of export incentives for third countries' exports can be partially or even fully compensated by *positive "GVCs linkages" effects*. This, in turn, gives additional pro reason for countries' (developing countries', in particular) participation in GVCs. Furthermore, respective negative and positive effects tend to be symmetric. In particular, according to the results, if country's export incentives cause large *negative competition effects* for other countries' exports, they more likely cause larger *positive "GVCs linkages" effects* whereas smaller positive effects will accompany smaller negative effects.

Important policy implication of the study is that export incentives targeted at intermediate goods/inputs are not necessarily harmful for third countries as they can boost export of the whole global value chain.

This paper is directly linked with two broad literatures. First, it contributes to the broader literature on third-country effects of trade policies (Winters and

Chang 2000; Chang and Winters 2002; Bown and Crowley 2006; Bown and Crowley 2007; Conconi et al. 2016), and particularly to the strand of literature that theoretically (directly or indirectly) examine effects of domestic export incentives for foreign/third countries' producers/exporters (Spencer and Brander 1983; Brander and Spenser 1985; To 1994; Bernhofen 1997; Ishikawa and Spencer 1999; Lee and Wong 2005). Despite the prominence of the latter theoretical models, to my knowledge there is no single study, which would empirically examine these effects. In this paper, I take a step towards bridging this gap between theory and evidence.

Second, this study relates to recent work motivated by the emergence of GVCs (Johnson and Noguera, 2012; Koopman et al., 2014; Kee and Tang 2016; Antras et al., 2012; Antras and Chor, 2013; Alfaro et al., 2015 and 2016 among others) and, in particular, to recently emerging literature on trade policies in the age of GVCs. Amiti and Konings (2007) estimate the effects of trade liberalization on plant productivity disentangling the productivity gains that arise from reducing tariffs on final goods from those that arise from reducing tariffs on intermediate inputs. They suggest and empirically show that cheaper imported inputs (due to lower tariffs) can raise productivity via learning, variety, and quality effects. Baldwin and Venables (2013) developed a model in which the interaction of forward and backward value chain linkages determines the range of goods and of parts that are produced in a developing economy. Using a simple formalisation of the range and sophistication of parts used in different goods, the paper investigates the effects of trade and industrial policy. Gawande, Hoekman and Cui (2015), using trade and protection data for seven large emerging market countries that have a history of active use of trade policy, empirically examine the influence of various factors on trade policy responses to the 2008 crisis. Participation in global value chains is found to be a powerful economic factor determining trade policy responses. Cruz and Bussalo (2015) analyze the impact of import tariff reduction

on exporting firms in Morocco through the channel of intermediate goods. They find that in general exporting firms benefit from import tariff reduction for imported inputs used in their exportable production. Blanchard, Bown and Johnson (2017) estimate the influence of GVC linkages on trade policy. In particular, they theoretically predict and empirically prove that discretionary tariffs will be decreasing in the domestic content of foreign-produced final goods and (provided foreign political interests are not too strong) the foreign content of domestically-produced final goods. Conconi et al. (2016), focusing on the North American Free Trade Agreement (NAFTA), find that rules of origin of NAFTA on final goods led to a sizeable reduction in the growth rate of Mexico's imports of intermediate goods from third countries.

The paper is organized as follows. Section 2 reviews related theoretical literature. Sections 3 discusses recent data on BICs export incentives. Section 4 discusses relevant trade patterns in large emerging countries considered as affected by BICs export incentives in this study. Section 5 describes empirical strategy and data. Section 6 presents and discusses empirical results. Finally, section 7 offers conclusions.

## 2. THEORETICAL FRAMEWORK

Though the perfectly competitive model of international trade says that, in general, export subsidies reduce home country welfare, in the world of imperfect competition by subsidizing/promoting export countries might increase their domestic welfare if they win in competition for profitable international markets. In their seminal paper Spencer and Brander (1983) has shown that in imperfectly competitive international markets, a government, which has the objective of maximizing domestic welfare, may have an incentive to subsidize research and development activities of domestic firms in industries in which they compete with



foreign firms for international markets. In particular, they conclude that in the case of subsidy domestic welfare is improved by the capture of a greater share of the output of rent-earning industries, although the subsidy-ridden non-cooperative international equilibrium is jointly suboptimal. In a companion paper Brander and Spencer (1985) further present the analysis based on imperfect competition (in particular, they incorporate Cournot duopoly into a one-period “third market” model) to explain why export subsidies might be attractive policies from a domestic point of view. They found that governments’ optimal policy is to subsidize exports because export subsidy improves the relative position of the domestic firm in non-cooperative rivalries with other firms, and allow it to expand its market share. To (1994) goes forward and examines export policy using a two-period model of oligopolistic competition with switching costs. He concludes: “When governments and firms are patient, consumers are impatient, and switching costs are significant, exporting countries will subsidize exports in the first period. A subsidy helps capture market share which is valuable to the government in terms of both second-period profits and second-period tax revenues” (To 1994, p. 100). All these studies come to a general conclusion that in markets with imperfect competition export incentives (subsidies, in particular) can benefit implemented countries and harm affected (rival) foreign/third countries if they help subsidized domestic firms to capture market shares of foreign rival firms in international markets. In other words domestic export incentives enhance domestic export (lead to the increase of domestic export shares in the world markets in affected industries) and negatively affect export of foreign rivals (i.e. export shares of affected foreign countries in affected industries fall). In this paper, I refer to the latter effect - i.e. negative effect of export incentive targeted at domestic good for foreign country’s export of the same good - as to *negative competition effect*.

In strategic trade policy models outlined above, only a final product is considered and only primary factors are used in the production process. However,

in the real world most industries use in production not only primary factors but also intermediate inputs. Furthermore, the rising international trade in inputs reflects the increasing importance of GVCs when production processes span multiple countries, with each country specializing in particular stages of a good's production sequence (Costinot, Vogel, and Wang 2013). These facts have been recognized in academic literature and a number of papers have emerged analyzing various issues of interaction between input trade and trade policies. In this study, I focus on the literature that examines effects of domestic export incentives for foreign/third countries' export, which transmit via GVCs' linkages (or input-output linkages).

The seminal paper for the case of third-country effects of export incentives aiming at domestic final-good producers in the presence of intermediate trade is Ishikawa and Spencer (1999). Under assumption of Cournot competition, they conclude that in a vertically related industry an export subsidy aimed at shifting rents from foreign to domestic final-good producers may also shift rents to oligopolistic foreign suppliers of intermediate inputs. Bernhofen (1997), assuming that intermediate good is supplied by a foreign monopolist, similarly finds that export subsidy on domestic final-good producer can cause a vertical rent-shifting from domestic downstream producer to foreign upstream supplier.

In their influential paper Spencer and Jones (1991) study the market structure where, in the home country A, there is a vertically integrated firm controlling exports of both an intermediate and a final good. This firm competes in a foreign country B with a firm that produces the final good and has the option of either importing the intermediate good or producing it at higher cost. In the case of trade in intermediate and final goods, if in home country A profit margins are higher for trade in the former, Spencer and Jones show that the optimal policy of country A government is a tax on export of the final good in order to shift towards trade in the intermediate good. Such a policy results in that low-cost vertically integrated manufacturer in country A exports an intermediate product, lowering the costs of a

foreign rival producer of final goods in country B thereby stimulating country B production and export of respective final goods. For the context of this study, these conclusions imply that when a government establishes export incentives targeting at domestic intermediate-good producers, it might benefit foreign producers who import these intermediate inputs to be used in their exportable production of final/higher-tier intermediate goods.

Lee and Wong (2005) examine the use of export subsidy to encourage domestic production of an intermediate input or a final product in a model with international rivalry between firms in two countries. Lee and Wong paper is a simple extension of a well-known international duopoly model considered in the literature to study the use of export subsidies. They consider two countries, labeled home and foreign, and two industries in each country: one for a final good for consumption, and another for an intermediate input, which is used exclusively in the production of the final good. Trade between the two countries in the intermediate product is allowed, while outputs of the final good are sold in the rest of the world. According to their model, under certain theoretical assumptions, domestic subsidy for intermediate-input producer leads to the increase of output and profit of foreign producer of final good, which uses respective intermediate input in her production. Lee and Wong (2005, p. 95) illustrate their finding by a simple example of computer industry: “If a subsidy is imposed on the local production of computer chips, while the local chip producers may benefit because of the profit-shifting effect, the drop in the chip price may simultaneously benefit the foreign computer producers.”

The discussed papers by Spencer and Jones (1991) and Lee and Wong (2005) are related to the broader literature on the role of input trade in enhancing trade and growth. In particular, in contributions by Kasahara and Rodrigue (2008), Goldberg et al. (2010), Amiti, Itskhoki and Konings (2014), Gopinath and Neiman (2014), Halpern, Koren and Szeidl (2015), Antràs, Fort and Tintelnot (2017),

Blaum, LeLarge and Peters (2018), firms engage in input trade because it lowers their unit cost of production via love of variety, quality and price channels.

Based on the discussion above we can distinguish between two types of positive effects of export incentives transmitting via GVCs linkages to third countries` export. Effect of the first type is induced by export incentive targeted at processed/final good and goes to oligopolistic/monopolistic foreign producers of inputs used in production of that subsidized processed/final good. Effect of the second type results from export incentive targeted at input and goes to foreign producers of processed/final goods who import and use subsidized input in their production. In this paper, in addition to *negative competition effects* of export incentives, I empirically test for the presence of *positive “GVCs linkages” effects* of the second type. Testing for the effects of the first type would require developing a different framework (based on bilateral trade flows) and, hence, can be better considered as a subject for a separate paper.

### 3. EXPORT INCENTIVES IN BRAZIL, INDIA AND CHINA

As was already noted in introduction, Brazil, India and China are very suitable for this project as source countries of export incentives due to their rather aggressive export promotion policies in recent years and important role in world trade. In particular, in a recent Global Trade Alert (GTA) report of the Centre for Economic Policy Research (CEPR) authored by Evenett (2015), it has been shown that since the Global Crisis began three of the BRICS<sup>3</sup> - Brazil, India, and China (BIC) - have introduced a large number of additional incentives to inflate exports (i.e. export incentives). Evenett (2015, p. 7) notes that: “These incentives harm the interests of trading partners that compete in the same markets abroad, boosting the market shares of goods shipped by these three BRICS”. Using detailed product and

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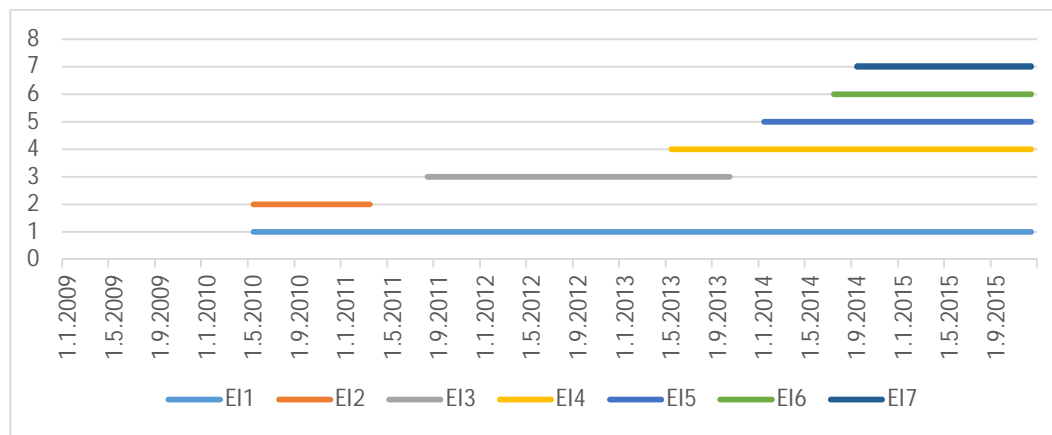
<sup>3</sup> BRICS is an acronym for Brazil, Russia, India, China and South Africa.

bilateral trade data Evenett further shows that for some countries the percentage of exports harmed by BRICS export incentives can be significant (see Appendix 2).

In this section, I briefly overview data on recent BICs` export incentives used in empirical analysis in this study. The data comes from Global Trade Alert (GTA) database. This database includes trade measures implemented from November 2008 to present. The data is provided at six-digit industry level (HS6-2012). As written on the front page of GTA website: “the International Monetary Fund noted in 2016, the GTA “has the most comprehensive coverage of all types of trade-discriminatory and trade liberalizing measures.””

First, on Figures 1-3 I report timing of BICs export incentives<sup>4</sup> for the period of 1<sup>st</sup> of November 2008 – 31<sup>st</sup> December 2015.

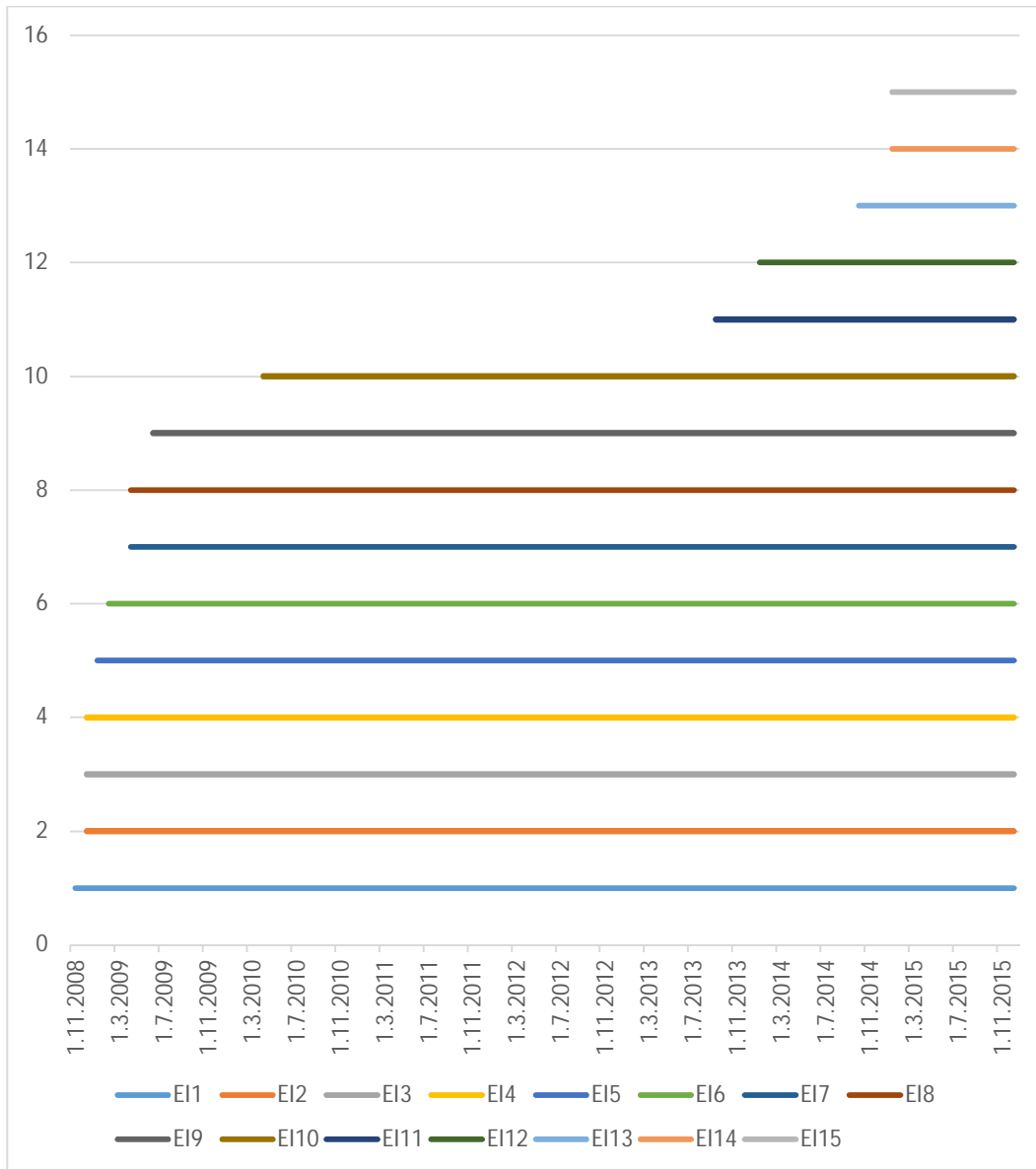
**Figure 1 Timing of Brazilian export incentives in 2009-2015\***



*Note:* EI is export incentive; \*there are no Brazilian export incentives registered in GTA in 2008.  
*Source:* GTA database.

<sup>4</sup> In this study, I include only those measures, which are implemented and almost certainly discriminate against foreign commercial interests (marked as “Red” in GTA database). I further exclude export incentives which are not industry-specific (i.e. general) and which concern one project (of a certain company or/and in a certain foreign country). Detailed information on export incentives used in descriptive analysis in this section and in estimations below is presented in Long Appendix (can be found in the very end of the paper).

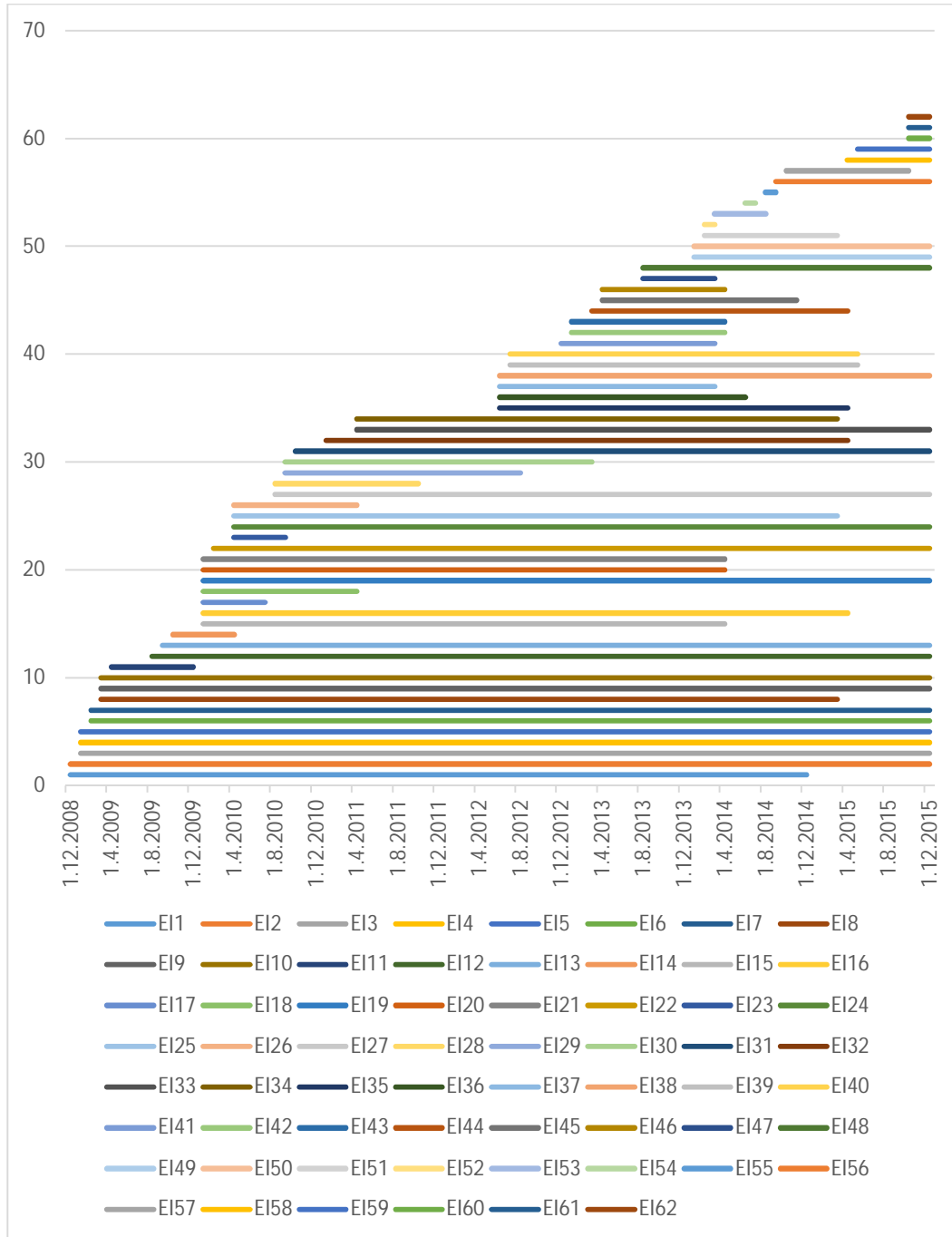
**Figure 2 Timing of Chinese export incentives in 2008-2015**



**Note:** EI is export incentive.

**Source:** GTA database.

**Figure 3 Timing of Indian export incentives in 2008-2015**



**Note:** EI is export incentive.  
**Source:** GTA database.

As we can see, many incentives have been implemented in the beginning of the studied period and lasted until its end (most of these incentives have “open ended” removal date). This tendency is especially evident for China. Due to global financial crisis, Chinese export started to decline in 2008. As China pursues export-led growth model, Chinese government activated its export promotion policies in 2008-2009 to overcome negative consequences of the global crisis for export.

By contrast, Brazilian government activated its export promotion policies in 2013-2015. In 2010 Brazilian GDP growth was 7.5%. By 2014 it has dropped to 0.5%. One of the key drivers of this decline has been a decrease in Brazilian export. To revive Brazilian economy, its then-president and government have prepared a new export promotion plan (SRATFOR 2015).

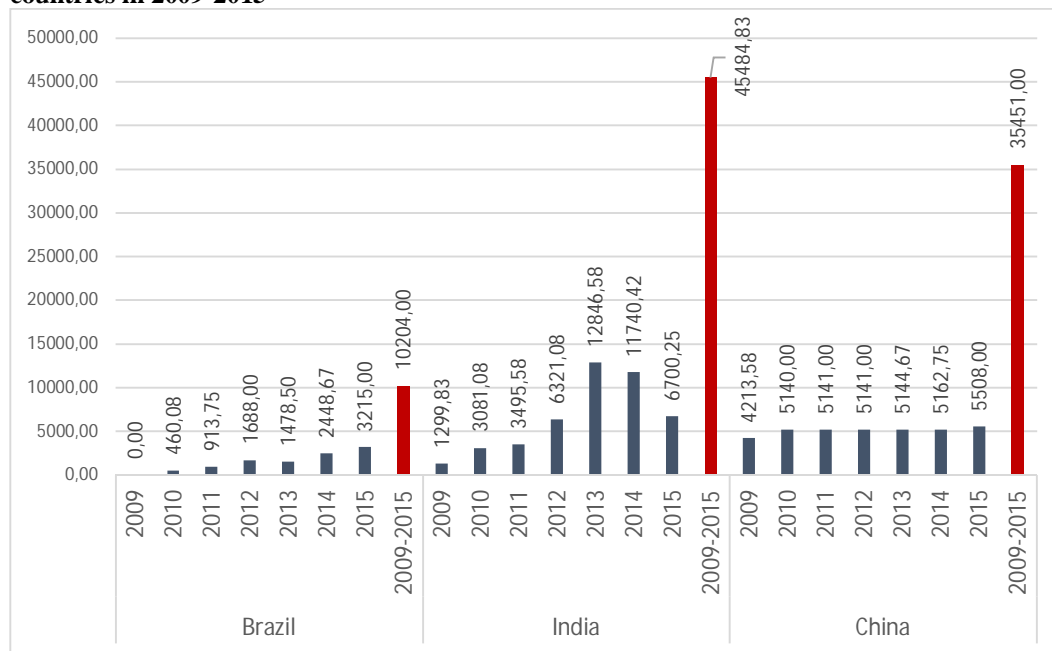
We can also see that Brazil and China have implemented significantly fewer export incentives than India (7 in Brazil and 15 in China versus 62 in India). This is not surprising. Both Brazil and China are members of World Trade Organization (from 1995 and 2001, respectively) and WTO prohibits most subsidies directly linked to the volume of exports (WTO Agreement on Subsidies and Countervailing Measures). On the other hand, India, like other low-income countries, has been exempted from the prohibition of export subsidies. WTO membership can also restrict implementation of other trade discriminative measures (including tax-based export incentives).

As a next step of analysis, I sum up export incentives over affected six-digit industries (HS6 2007 codes; data is reported in HS6 2012 in present version of GTA database but was converted into HS6 2007 for the purpose of this study) and by year of being in force. For example, if in a country Y (one of BICs) in a year t two export incentives have been in force and the first one affects 10 six-digit industries whereas the second one – 5 six-digit industries, the indicator of export incentives in a year t for a country Y equals to 15. This way we are able to count not just for the number of implemented export incentives but also for their industrial coverage



(some incentives concern only one six-digit industry, some – hundreds) and duration (some measures last only few months, some – five and even more years). If export incentive is in force only several months in a particular year, i.e. less than one year, I count for it by  $1/12 * z$  where  $z$  is duration of export incentive in months. For the above example if the first export incentive which affects 10 six-digit industries has been in force for six months (instead of one year) in a year  $t$ , our indicator of export incentives in a year  $t$  for country  $Y$  equals to 10 instead of 15 ( $\underline{10} = \underline{5} [10 * 0.5 \{1/12 * 6\}] + \underline{5}$  instead of  $\underline{15} = \underline{10} + \underline{5}$  in the original example). Results of the computations for BIC countries are reported on Figure 4.

**Figure 4 Number of export incentives in force over affected industries (HS6 2007) in BIC countries in 2009-2015**



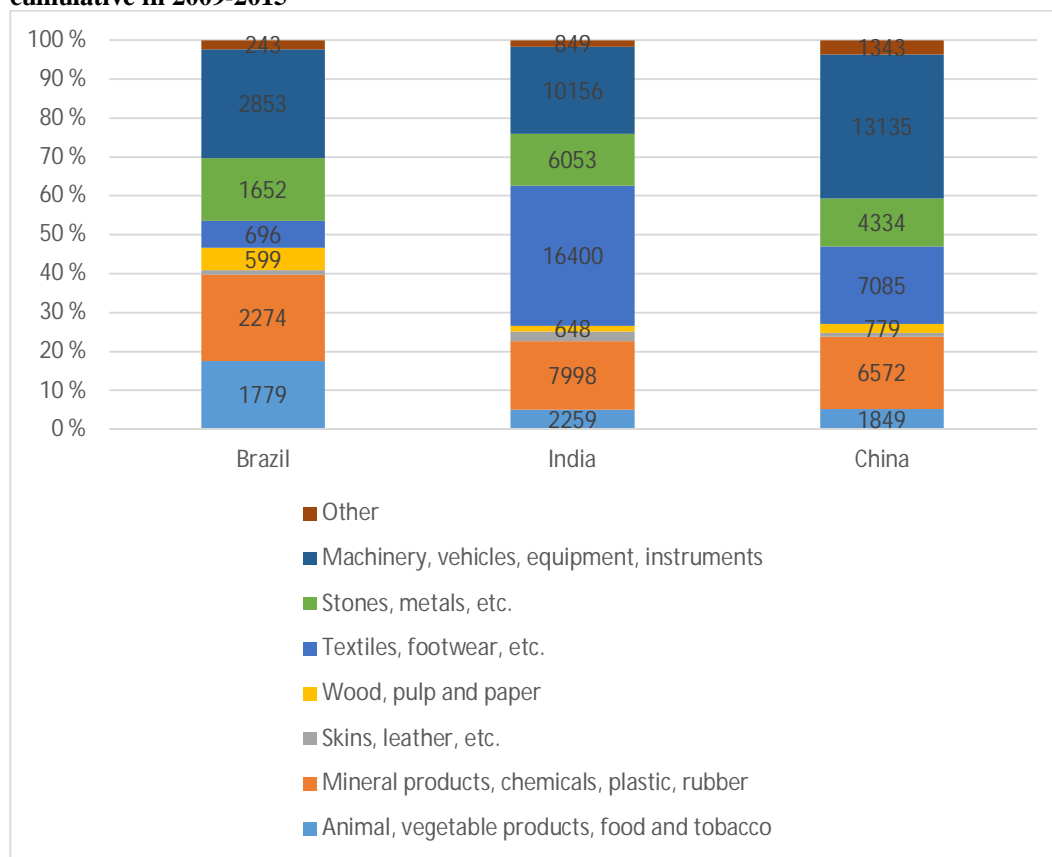
**Note:** Red bars reflect cumulative sums over the period.  
**Source:** Author's calculations based on GTA data.

As can be seen, India is an obvious leader in implementing export incentives among BICs. During the period of 2009-2015 cumulative number of export incentives in

force in India over six-digit industry-year (red bars on the Figure) was about 1.3 times higher than in China and 4.5 times higher than in Brazil.

On Figure 5 I report sectoral breakdown of BICs export incentives in force over six-digit industry-year as cumulative for the period of 2009-2015 (red bars on Figure 4).

**Figure 5 Sectoral breakdown of BICs export incentives in force over six-digit industry-year as cumulative in 2009-2015**



**Note:** Based on HS chapter classification: Animal, vegetable products, food and tobacco (chapters 1-24); Mineral products, chemicals, plastic, rubber (chapters 25-40); Skins, leather, etc. (chapters 41-43); Wood, pulp and paper (chapters 44-49); Textiles, footwear, etc. (chapters 50-67); Stones, metals, etc. (chapters 68-83); Machinery, vehicles, equipment, instruments (chapters 84-92); Other (chapters 92-99).

**Source:** Author's calculations based on GTA data.

From Figure 5 we can see that all BIC countries implemented significant numbers of export incentives in machinery, vehicles, equipment, instruments` sector (for China the share is 37%; for Brazil – 28% and for India – 22%). India and China implemented many export incentives in “Textile, footwear, etc.” sector – around 36% and 20%, respectively. Brazil implemented relatively significant number of export incentives in agricultural and food industries – about 17% in total number of export incentives. BICs rather intensively stimulate export in “Mineral products, chemicals, plastic and rubber sector” – 22% of all export incentives in Brazil, about 18% in India and about 19% in China.

In Table 1 I report data on types of BICs export incentives as reported in GTA database.

**Table 1 BICs export incentives (cumulative number of implemented incentives in 2008-2015) by type**

	<i>Brazil</i>	<i>India</i>	<i>China</i>
<i>Trade finance (export subsidy)</i>	2	15	0
<i>Tax-based export incentive</i>	5	38	15
<i>Other export incentive</i>	0	9	0
<i>Total</i>	7	62	15

*Source:* Author`s calculations based on GTA data.

As we can see, India stands out for the number of measures taken to boost exports through subsidized trade finance (see also Evenett (2015)). The reason for this has been already discussed above, in particular, that India is not a WTO member (whereas Brazil and China are WTO members) and WTO prohibits most of export subsidies, especially for its members. We can also see from the Table and Long Appendix (can be found in the very end of the paper) that many of BICs export incentives involve tax refunds or reductions for firms engaged in exporting. For

example, China mostly implements Value Added Tax (VAT) rebates and reductions.

Finally, in Table 2 I report summary statistics of export incentives implemented by affected (in this study) emerging countries in 2009-2015 to show that their amount and coverage are rather small in comparison with BICs.

**Table 2 Summary statistics of export incentives implemented in affected emerging countries in 2009-2015**

<i>Country</i>	<i>Number of export incentives implemented in 2008-2015*</i>	<i>Export incentives in force over six-digit industry-year (in force) as cumulative in 2009-2015</i>
<i>Argentina</i>	4	19,00
<i>Chile</i>	0	0,00
<i>Colombia</i>	3	2796,58
<i>CzechR</i>	3	81,67
<i>Estonia</i>	3	81,67
<i>Greece</i>	3	81,67
<i>Hungary</i>	3	81,67
<i>Indonesia</i>	1	1530,00
<i>Korea</i>	0	0,00
<i>Malaysia</i>	0	0,00
<i>Mexico</i>	0	0,00
<i>Peru</i>	3	81,67
<i>Poland</i>	1	400,00
<i>Russia</i>	4	3688,50
<i>Thailand</i>	1	39,00
<i>Turkey</i>	5	4398,08
<i>Uruguay</i>	28	560,17
<i>Vietnam</i>	0	0,00

**Note:** \*As for BICs, I include only those measures, which are implemented and almost certainly discriminate against foreign commercial interests (marked as “Red” in GTA database). I further exclude export incentives which are not industry-specific (i.e. general) and which concern one project (of a certain company or/and in a certain foreign country).

As can be seen largest numbers of export incentives, taking into account both industrial and time coverage, have been implemented in Turkey, Russia, Colombia,

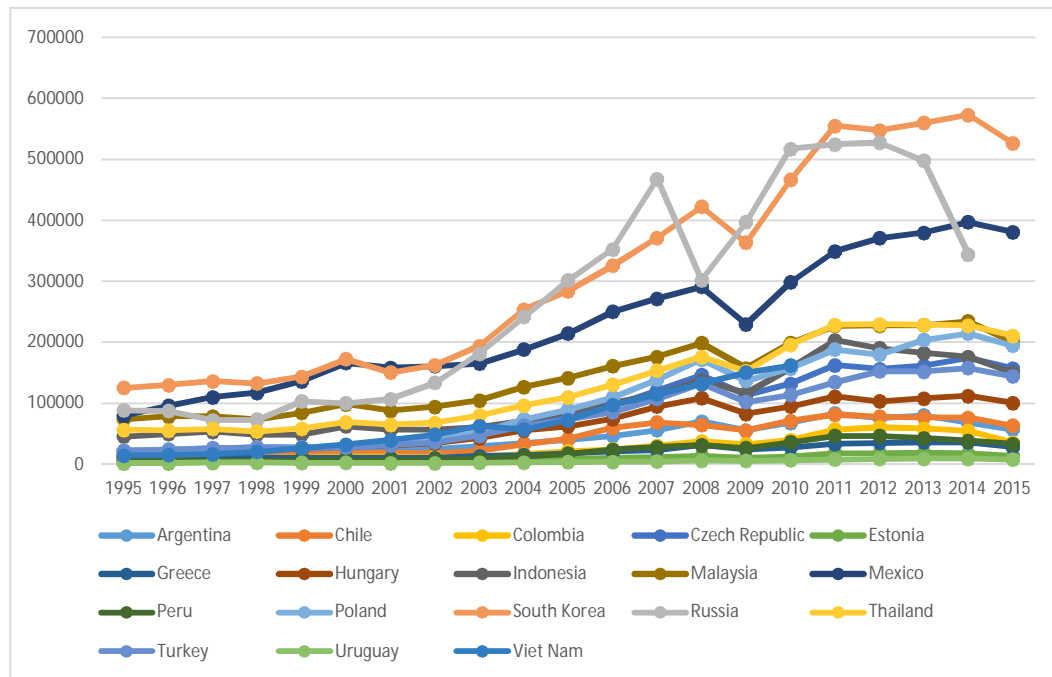
Indonesia and Uruguay. However, the respective numbers are still significantly smaller than in BICs.

#### 4. TRADE PATTERNS OF AFFECTED EMERGING COUNTRIES

##### *4.1. Basic export patterns*

On Figure 6 I report export time dynamics in recent 20 years of 18 emerging countries considered as affected by BICs export incentives in this study.

**Figure 6 Export time dynamics of emerging countries in 1995-2015, Million USD**



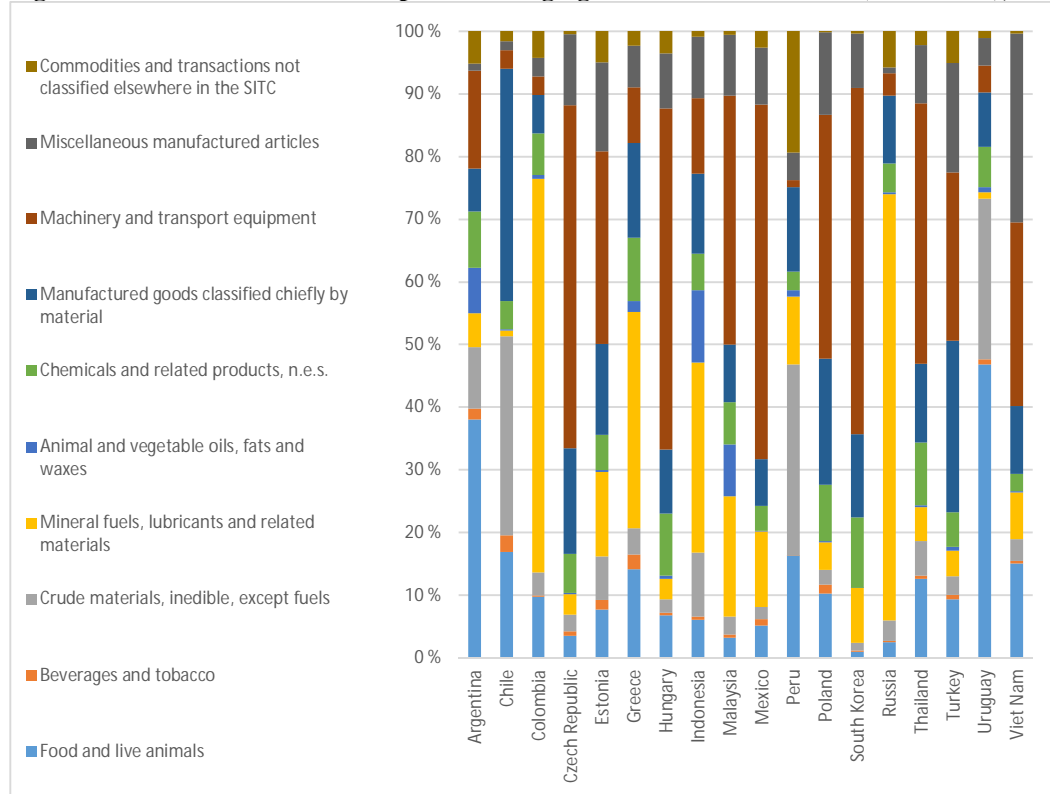
Source: UN COMTRADE

As we can see, though export levels differ between the countries, export dynamics has been rather similar: upward trend until 2007/2008, drop in 2008/2009, some

increase until 2011 and then slight downward trend. Largest exporters in absolute terms are South Korea, Russia and Mexico.

On Figure 7 I report industrial structure of export of the same emerging countries in 2010-2015 as cumulative.

**Figure 7 Industrial structure of export in emerging countries in 2010-2015 (cumulative), %**



*Note:* SITC revision 3 classification, one-digit sectors.

*Source:* UN COMTRADE

According to Figure 7 all countries can be broadly divided into two groups. First group consists of emerging markets which largely export manufacturing goods: Czech Republic, Estonia, Hungary, Malaysia, Mexico, Poland, South Korea, Thailand, Turkey and Vietnam. Second group consists of countries which largely export natural resources and related goods (mineral fuels, lubricants and related

materials or crude materials, inedible, except fuels) and/or food and agricultural goods: Argentina, Chile, Colombia, Greece, Indonesia, Peru, Russia and Uruguay.

#### *4.1. Usage of BICs inputs by affected emerging countries*

Hypothesizing that there can be significant positive effects of BICs export incentives targeted at inputs for export of other large emerging countries if subsidized inputs are imported by these countries to be used in their exportable production, we assume that dependence of these countries on BICs intermediate inputs is significant. To show this I first report shares of BICs in intermediate import of affected emerging countries in Table 3.

**Table 3 BICs shares in total intermediate import of affected emerging countries, as cumulative in 2009-2015, %**

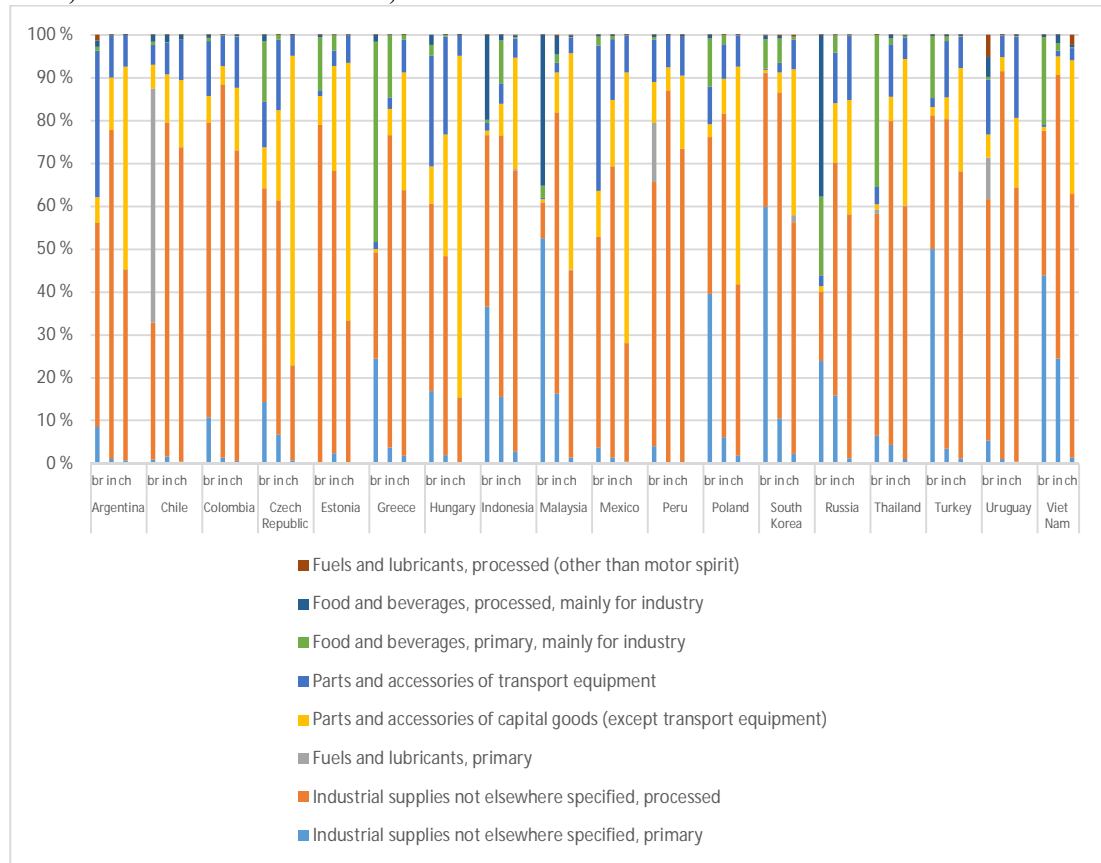
Country	Brazil	India	China	BICs
Argentina	26.6	1.3	14.3	42.2
Chile	10.5	0.7	12.4	23.6
Colombia	6.3	2.1	13.2	21.7
CzechR	0.2	0.4	7.2	7.7
Estonia	0.3	0.4	7.2	7.9
Greece	0.4	0.6	3.1	4.1
Hungary	0.2	0.5	6.0	6.7
Indonesia	1.8	2.5	14.9	19.3
Korea	1.4	0.8	14.4	16.6
Malaysia	1.2	1.5	13.8	16.6
Mexico	1.2	0.7	13.5	15.4
Peru	5.9	2.2	14.0	22.1
Poland	0.6	0.8	7.9	9.4
Russia	1.5	0.8	14.7	17.1
Thailand	1.2	1.3	11.9	14.4
Turkey	1.2	2.3	8.1	11.6
Uruguay	15.0	1.4	9.9	26.4
Vietnam	1.4	2.0	26.3	29.7
<b>Average</b>	<b>4.3</b>	<b>1.2</b>	<b>11.8</b>	<b>17.4</b>

*Note:* BEC classification was used to identify intermediate goods.

*Source:* UN COMTRADE

As we can see from the Table, respective shares are especially high for intermediate import from China. On Figure 8 I further report basic industrial structure of affected emerging countries` intermediate import from BICs.

**Figure 8 Industrial breakdown of intermediate import of affected emerging countries from BICs, as cumulative in 2009-2015, %**



**Note:** 1) BEC classification was used to identify and classify intermediate goods; 2) *br* denotes Brazil, *in* denotes India and *ch* denotes China.

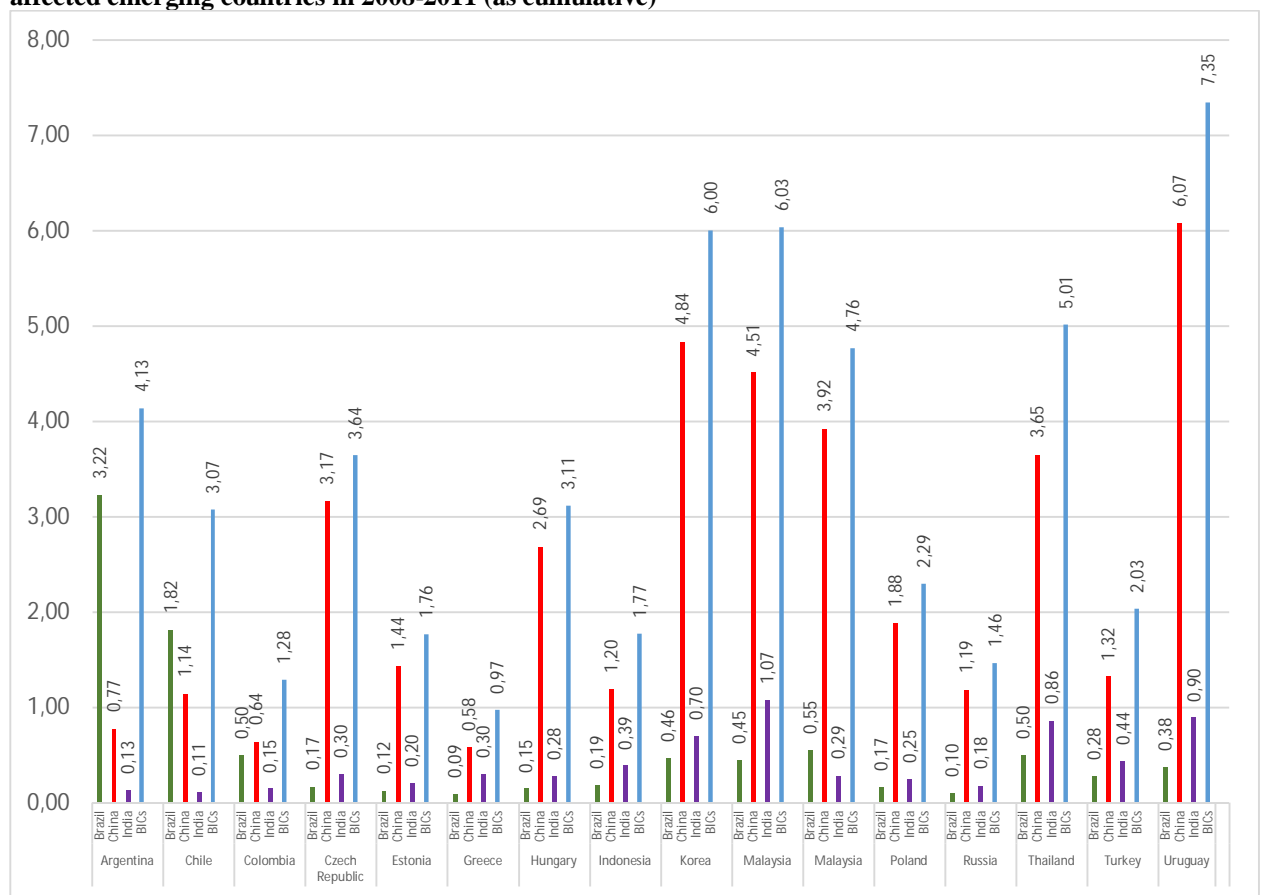
**Source:** UN COMTRADE

We can see that in general intermediate import of emerging countries from China and India largely consists of processed industrial supplies and parts and accessories of capital goods whereas from Brazil – of primary industrial supplies.



The other indicator of the scale of usage of one country's inputs in exportable production of the other is origin of value added in gross export. Such data is reported by OECD TiVA for very broad sectors (ISIC two-digit sectors). On Figure 9 I report summary data for 2008-2011 as cumulative (2011 is last available data point).

**Figure 9 Shares (percentages) of BICs value added in total value added in gross export of affected emerging countries in 2008-2011 (as cumulative)**



Source: OECD-TiVA

As can be seen, Chinese value added exhibits largest percentages for most countries in the sample. On average in 2008-2011 Chinese value added in gross export of the

affected emerging countries equaled to 2.44 % which is about 6 times higher than Indian value added (0.41 %) and about 4.2 times higher than Brazilian value added (0.57 %).

## 5. ESTIMATION STRATEGY AND DATA

My baseline model for empirical estimation of the effects of export incentives on foreign/third countries` export looks as follows:

$$\begin{aligned}
 LnEX_{itc} = & a_0 + a_1 LnEX_{i,t-1,c} + a_2 NE(BR\_EI)_{itc} + a_3 NE(IN\_EI)_{itc} + a_4 NE(CH\_EI)_{itc} + \\
 & + a_5 PE(BR\_EI)_{itc} + a_6 PE(IN\_EI)_{itc} + a_7 PE(CH\_EI)_{itc} + \\
 & + \hat{\alpha}_{ct} r_{ct}(C' Y) + \hat{\alpha}_{it} d_{it}(Y' I)D + \hat{\alpha}_{ci} b_{ci}(C' I)D + e_{it}
 \end{aligned}$$

(1),

where  $LnEX_{itc} / LnEX_{i,t-1,c}$  is natural logarithm of country  $c$  (1,...,18) export in USD in six-digit industry  $i$  (HS6 2007) in year  $t / t-1$  (2008,..., 2015)<sup>5</sup>. Countries  $c$  are emerging countries listed in Appendix 1. Data on export comes from UN COMTRADE.

$NE(BR\_EI)_{itc}$ ,  $NE(IN\_EI)_{itc}$  and  $NE(CH\_EI)_{itc}$  were built in the way to reflect *negative competition effects* coming from BICs export incentives to export of selected emerging countries. I utilize the following formula to construct these variables:

$$NE(Y\_EI)_{itc} = Y\_EI_{it} \cdot GEO\_ESI_{(c\_Y)i,t(0408)} \quad (2),$$

---

<sup>5</sup> I compute it as  $\ln(\text{Exp}+1)$  as there are many zero observations in export data at six-digit industry level.

where  $Y\_EI_{it}$  is the number of export incentives implemented in six-digit industry  $i$  (reported in HS6 2012; converted into HS6 2007 using United Nations` respective conversion table) in country  $Y$  (hereafter  $Y$  represents Brazil ( $BR$ ), India ( $IN$ ) or China ( $CH$ )) which are in force in year  $t$  (2009,..., 2015). For example, if in country  $Y$  three export incentives, which included industry  $i=020110$  (meat; of bovine animals, carcasses and half-carcasses, fresh or chilled) as affected, were in force in the year of 2010, then observation of  $Y\_EI_{it}$  for  $t=2010$  and  $i=020110$  equals to 3. If a measure was in force in a year  $t$  less than one year, I used the following formula:  $1/12*z$  where  $z$  is a number of months the measure was in force in a year  $t$ . If in the above example, first measure was in force for nine months in 2010, second – for six months and third – for one month, then the respective observation equals to  $1/12*9 + 1/12*6 + 1/12*1 = 0.75 + 0.5 + 0.08(3) = 1.3(3)$  instead of 3. Data on export incentives comes from Global Trade Alert (GTA) database. The information on export incentives used in computations is presented in Long Appendix (it can be found in the very end of the paper). Their descriptive analysis was presented in Section 3 above. It should be noted that only discriminatory measures (according to GTA classification they are marked by “Red”) were included in computations. I further excluded not industry-specific incentives (i.e. general measures which concern export promotion on the whole) and project-specific incentives (i.e. which concern only one specific project or/and export to certain country). The larger the  $Y\_EI_{it}$ , the larger *negative competition effects* are expected for export of country  $c$  in six-digit industry  $i$  in year  $t$ .

$GEO\_ESI_{(c\_Y)i,t(0408)}$  is export similarity index of geographical distribution of export in six-digit industry  $i$  between country  $Y$  and country  $c$  in 2004-2008 (as cumulative; HS6 2002; converted into HS6 2007 using United Nations` respective

conversion table). I compute similarity indices for the lagged period to avoid possible estimation bias. In particular, BICs export incentives, in the same periods when in force, can partially affect geographical distribution of export of other emerging markets. For example, in case of BICs` aggressive export promotion policy in some six-digit industry  $i$ , other countries-exporters in that industry, under the pressure of competition, can switch to export markets where BICs` exporters are absent/not very active in the affected industry. This will decrease similarity of geographical distribution of exports between BICs and other countries (in this study other emerging markets) in that industry which then can complicate estimation of *negative competition effects* of BICs export incentives. If we compute similarity indices for the lagged period, this problem is solved at least partially. However, using similarity indices for the lagged period creates another sticking point. In particular, if either country  $Y$  or country  $c$  did not export goods of some six-digit industry  $i$  in the period of 2004-2008, similarity index cannot be computed and, hence, this industry is excluded from estimations even if country  $Y/c$  started to export goods of that industry in the estimation period, 2009-2015. To address this issue, I substitute missing similarity indices by mean values computed over existing values of similarity indices for six-digit industries within common four-digit or two-digit industries (depending on availability).

Export similarity index was developed by Finger and Kreinin (1979) and was initially intended to measure product/industrial similarity between exports of two countries to the same third country. I transform this index to measure geographical similarity between exports of two countries of the same product/industry in the following way:

$$GEO\_ESI_{(c\_Y)i,t(0408)} = \frac{X_{Yi}^b}{X_{Yiw}^b} \cdot \frac{X_{ci}^b}{X_{ciw}^b} \quad (3),$$

where:

$X_{Yi}^b$  is the amount of export in six-digit industry  $i$  (HS6 2002) from country  $Y$  (Brazil, India or China) to country  $b$  (1, ..., 251) in 2004-2008 (as cumulative);

$X_{Yiw}$  is the amount of export in six-digit industry  $i$  (HS6 2002) from country  $Y$  (Brazil, India or China) to world in 2004-2008 (as cumulative);

$X_{ci}^b$  is the amount of export in six-digit industry  $i$  (HS6 2002) from country  $c$  (affected emerging country; 1, ..., 18) to country  $b$  (1, ..., 251) in 2004-2008 (as cumulative);

$X_{ciw}$  is the amount of export in six-digit industry  $i$  (HS6 2002) from country  $c$  (affected emerging country; 1, ..., 18) to world in 2004-2008 (as cumulative).

As original index, this index ranges from 0 to 1 where 0 reflects no similarity and 1 – full similarity. Hence, the larger the  $GEO\_ESI_{(c\_Y)i,t(0408)}$ , the larger the similarity in geographical distribution of export in six-digit industry  $i$  between country  $Y$  and country  $c$  and, hence, the larger *negative competition effects* are expected for export of country  $c$  in six-digit industry  $i$  from export incentives implemented in country  $Y$  targeted at that industry. In Table 4 I report descriptive statistics of computed  $GEO\_ESI_{(c\_Y)i,t(0408)}$  between BICs and affected emerging markets. Data used for computations comes from UN COMTRADE.

**Table 4 GEO\_ESIs between BICs and affected emerging markets, computed for export in 2004-2008 (as cumulative)**

Country	Brazil					India					China				
	N.ob.	Mean	Std. Dev.	Min	Max	N.ob.	Mean	Std. Dev.	Min	Max	N.ob.	Mean	Std. Dev.	Min	Max
Argentina	4469	<b>0.17</b>	0.16	0	0.99	458	<b>0.05</b>	0.08	0	0.98	4563	<b>0.06</b>	0.09	0	0.90
Chile	4183	<b>0.15</b>	0.17	0	1.00	4265	<b>0.04</b>	0.08	0	0.96	4252	<b>0.05</b>	0.09	0	1.00
Colombia	4221	<b>0.10</b>	0.13	0	1.00	4298	<b>0.03</b>	0.06	0	0.85	4271	<b>0.04</b>	0.06	0	0.78
Czech Rep.	4699	<b>0.06</b>	0.10	0	1.00	4883	<b>0.10</b>	0.11	0	0.91	4861	<b>0.10</b>	0.11	0	0.81
Estonia	4203	<b>0.02</b>	0.06	0	0.97	4306	<b>0.04</b>	0.07	0	0.90	4297	<b>0.05</b>	0.08	0	0.97
Greece	4497	<b>0.04</b>	0.09	0	0.96	464	<b>0.07</b>	0.10	0	1.00	4618	<b>0.07</b>	0.09	0	0.93
Hungary	4262	<b>0.05</b>	0.09	0	1.00	4344	<b>0.08</b>	0.11	0	0.85	434	<b>0.08</b>	0.10	0	1.00
Indonesia	4546	<b>0.06</b>	0.10	0	1.00	4704	<b>0.14</b>	0.15	0	0.96	4675	<b>0.18</b>	0.16	0	1.00
Korea	4611	<b>0.08</b>	0.12	0	1.00	4784	<b>0.14</b>	0.14	0	0.96	4764	<b>0.24</b>	0.18	0	1.00
Malaysia	4633	<b>0.06</b>	0.10	0	1.00	4789	<b>0.14</b>	0.14	0	0.99	4754	<b>0.19</b>	0.16	0	1.00
Mexico	4542	<b>0.12</b>	0.14	0	1.00	4657	<b>0.08</b>	0.11	0	0.88	4636	<b>0.09</b>	0.12	0	0.99
Peru	4053	<b>0.12</b>	0.14	0	1.00	4118	<b>0.05</b>	0.09	0	0.75	4103	<b>0.05</b>	0.09	0	0.99
Poland	4702	<b>0.06</b>	0.11	0	0.98	4878	<b>0.10</b>	0.12	0	1.00	4854	<b>0.11</b>	0.11	0	0.94
Russia	4534	<b>0.04</b>	0.09	0	0.99	467	<b>0.06</b>	0.09	0	0.83	4668	<b>0.08</b>	0.10	0	1.00
Thailand	4649	<b>0.07</b>	0.12	0	1.00	4824	<b>0.16</b>	0.15	0	0.97	4791	<b>0.23</b>	0.18	0	1.00
Turkey	4624	<b>0.06</b>	0.11	0	0.96	4776	<b>0.13</b>	0.14	0	0.89	4752	<b>0.13</b>	0.12	0	1.00
Uruguay	2669	<b>0.17</b>	0.19	0	1.00	2699	<b>0.04</b>	0.08	0	1.00	2699	<b>0.04</b>	0.08	0	0.94
Vietnam	4104	<b>0.06</b>	0.11	0	1.00	4219	<b>0.11</b>	0.14	0	1.00	4196	<b>0.19</b>	0.18	0	1.00
Average		<b>0.08</b>					<b>0.08</b>					<b>0.11</b>			

*Source:* Author's calculations based on UN COMTRADE data.

As we can see, highest similarity indices are found for countries located in the same region. In particular, Brazil has highest similarity indices with Argentina (0.17), Uruguay (0.17), Chile (0.15), Mexico (0.12), Peru (0.12) and Colombia (0.1); India – with Thailand (0.16), Indonesia (0.15), South Korea (0.14) and Malaysia (0.14); China - with South Korea (0.24), Thailand (0.23), Vietnam (0.19), Malaysia (0.19) and Indonesia (0.18). This is very plausible pattern because geographical distribution of export largely depends on geographical position of the country, i.e. countries tend to export primarily to their neighbors.

$PE(BR\_EI)_{itc}$ ,  $PE(IN\_EI)_{itc}$  and  $PE(CH\_EI)_{itc}$  were built in the way to capture positive effects which are coming from BICs` export incentives targeted at inputs to countries c`s export of goods, in production of which imported subsidized BICs` inputs are used. I utilize the concept of weighted arithmetic mean to construct the respective parameters:

$$PE(Y\_EI)_{itc} = \frac{\sum_{j^1 i} InEI_{jtY} \cdot \frac{Im_{j,0408,from.Y.to.c}}{Im_{j,0408,c}} \cdot DR_i^j}{\sum_{j^1 i} \frac{Im_{j,0408,from.Y.to.c}}{Im_{j,0408,c}} \cdot DR_i^j} \quad (4).$$

$PE(Y\_EI)_{itc}$  is the measure of positive effects coming from country Y`s export incentives targeted at six-digit input industries  $j^1 i$  (reported by GTA in HS6 2012; converted into HS6 2007 using United Nations` respective conversion table) to export of country c in six-digit industry i (HS6 2007) in year t. It equals to weighted arithmetic mean of  $InEI_{jtY}$ , the number of export incentives implemented in country Y in six-digit input industry  $j^1 i$  in force in year t (2009, ..., 2015), over j. BEC (Classification by Broad Economic Categories) and its correspondence with HS6 2007 have been used to separate six-digit input industries (there are then 3146 HS6 2007 input industries).

Weights are represented by the term:

$$\frac{Im_{j,0408,from.Y.to.c}}{Im_{j,0408,c}} \cdot DR_i^j \quad (5),$$

where  $\frac{\text{Im}_{j,0408, \text{from } Y \text{ to } c}}{\text{Im}_{j,0408, c}}$  is share of six-digit industry  $j$ 's import of country  $c$  from country  $Y$  in total six-digit industry  $j$ 's import of country  $c$  for the period of 2004-2008 (as cumulative; HS6 2002; converted into HS6 2007 using United Nations' respective conversion table). These import shares reflect level of potential usage of country  $Y$ 's inputs of six-digit industries  $j$  in production in country  $c$ . Similar to computation of GEO-ESIs, we compute these shares for the lagged period to avoid possible estimation bias. In particular, BICs aggressive export promotion policies for intermediate goods can enhance countries  $c$  to increase import of BICs subsidized intermediates. This will result in increase of respective import shares that, in turn, can interfere estimation process. Hence, I utilize lagged import shares to get more reliable results.

$DR_i^j$  is direct requirement of input from six-digit industry  $j$  (HS6 2007) in production of one unit in six-digit industry  $i$  (HS6 2007). The data was taken from BEA Commodity-to-Industry Direct Requirement table for the year 2007. As BEA table is based on NAICS-2007 classification, I match industries from NAICS-2007 classification to HS6-2007 products by using the concordance table provided by the BEA (see also Conconi et al. 2016). This term reflects potential usage of six-digit industry  $j$ 's inputs in six-digit industry  $i$ 's production. I aware that this is quite a rough approximation as, first, it is based on US data while this study concerns large emerging countries and, second, matching of 389 industries of NAICS classification with more than 5000 industries of HS6 classification can be considered as quite crude. However, to the best of my knowledge there is no similar publicly available data for emerging economies or more refined data for USA or other countries.

It is important to mention that the choice of weights was affected by data availability issues. In particular, it would be ideal to use as weights ratios of BICs



value added of six-digit input industries  $j$  in export/exportable production of countries  $c$  in six-digit industries  $i$ . Unfortunately, this data is not publicly available at significantly detailed level.

It should be noted that in some cases both nominator and denominator in formula (4) equal to zero. In this case, formally we cannot make computations. However, according to the framework of this study, zero denominator actually means that no input from country  $Y$  is used in respective six-digit industry  $i$  of respective country  $c$  and, hence, it is logical to assign zero values in such cases.

## 6. EMPIRICAL RESULTS

### 6.1. Baseline results

Estimation results of equation (1) are reported in Table 5. For estimations, I use linear regression absorbing multiple levels of fixed effects<sup>6</sup>. Descriptive statistics and correlation matrix of the variables are reported in Appendix 3.

**Table 5 Baseline results**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
$LnEX_{it-1,c}$	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***
$NE(BR\_EI)_{itc}$		-0.112 (0.066)*			-0.084 (0.066)				-0.085 (0.066)
$NE(IN\_EI)_{itc}$			-0.162 (0.023)***		-0.154 (0.023)***				-0.153 (0.023)***
$NE(CH\_EI)_{itc}$				-0.685 (0.178)***	-0.584 (0.179)***				-0.606 (0.179)***
$PE(BR\_EI)_{itc}$						-0.023 (0.032)			-0.035 (0.032)
$PE(IN\_EI)_{itc}$							0.034 (0.016)**		0.035 (0.016)**
$PE(CH\_EI)_{itc}$								1.195 (0.193)***	1.212 (0.193)***
N.obs.	621 273	620 762	620 944	620 909	620 727	621 273	621 273	621 273	620 727
Adj. R-sq.	0.8576	0.8575	0.8575	0.8575	0.8575	0.8576	0.8576	0.8577	0.8575

**Note:** (1) \* if  $p < 0.10$ , \*\* if  $p < 0.05$ , \*\*\* if  $p < 0.01$ ; (2) standard errors in parentheses; (3) “Country by year”, “country by industry” and “year by industry” fixed effects are included in all models; (4) Constant is not reported by Stata for *reghdfe* command.

<sup>6</sup> I use Stata command *reghdfe* to perform estimations. *reghdfe* implements the estimator from Correia (2017).

From the results we can see that there is rather convincing evidence that BICs export incentives negatively affect export of other emerging markets via direct competition in international export markets. This evidence has strongest statistical significance (and largest magnitude of the coefficient) for Chinese export incentives and weakest (and smallest magnitude of the coefficient) – for Brazilian incentives.

As for *positive “GVCs linkages” effects*, the respective coefficients are positive and statistically significant for Indian and Chinese export incentives targeted at inputs. Literally, this means that when India or China implements export incentive targeted at input which is used in exportable production in other emerging markets, positive effects spill over to export of these emerging countries.

The coefficients of determination, R-squared (adjusted), indicate that the chosen empirical model fits the data well. In particular, it stably equals to approximately 0.86 in all nine baseline models.

## ***6.2. Baseline results` interpretation***

First, I interpret the coefficients of negative and positive effects` indicators in model (9) of Table 5. For this, I compute exponentiated values of the respective coefficients (as the outcome variable is in log). The results of computations are presented in Table 6.

**Table 6 Exponentiated values of the coefficients of explanatory variables in baseline full model\***

<b>Coefficient of <math>\hat{\epsilon}</math></b>	$NE(BR\_EI)_{it}$	$NE(IN\_EI)_{it}$	$NE(CH\_EI)_{it}$	$PE(BR\_EI)_{it}$	$PE(IN\_EI)_{it}$	$PE(CH\_EI)_{it}$
<b>Initial value</b> $a_n$	-0.085 (0.066)	-0.153 (0.023)***	-0.606 (0.179)***	-0.035 (0.032)	0.035 (0.016)**	1.212 (0.193)***
<b>Exponentiated value</b> $e^{a_n}$	0.92	0.86	0.55	0.97	1.04	3.36
<b>Percentage change</b> $(e^{a_n} - 1) \cdot 100$	-8%	-14%	-45%	-3%	4%	236%

Note:\* Model (9) in Table 5.

From the Table we can say that for a one-unit increase in  $NE(BR\_EI)_{it}$ ,  $NE(IN\_EI)_{it}$  and  $NE(CH\_EI)_{it}$  we expect to see, respectively, 8, 14 and 45% decrease in geometric mean<sup>7</sup> of export of country c in six-digit industry i in year t. Second, we can say that for a one-unit increase in  $PE(BR\_EI)_{it}$ ,  $PE(IN\_EI)_{it}$  and  $PE(CH\_EI)_{it}$  we expect to see, respectively, 3% decrease (though this decrease is not statistically significant) and 4 and 236% increase in geometric mean of export of country c in six-digit industry i in year t.

<sup>7</sup> The geometric mean is a type of mean or average, which indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean, which uses their sum). The geometric mean is defined as the  $n$ th root of the product of  $n$  numbers,

i.e., for a set of numbers  $x_1, x_2, \dots, x_n$ , the geometric mean is defined as:

$$\frac{1}{n} \sum_{i=1}^n x_i = \sqrt[n]{x_1 \cdot x_2 \cdot \dots \cdot x_n}$$

Due to complex and different construction of the indicators of negative and positive effects, these numbers can only inform us that largest effects, both negative and positive, for emerging markets` export are expected to come from Chinese export incentives whereas smallest - from Brazilian export incentives. Yet this conclusion looks as quite important as it also suggests that respective negative and positive effects coming from the same country are likely to be rather symmetrical in absolute magnitude. In particular, larger *negative competition effects* are likely to be compensated by larger *positive “GVCs linkages” effects* whereas smaller positive effects will accompany smaller negative effects.

Due to complex structure of the parameters, direct interpretation of the coefficients is not enough to understand the economic meaning of the results. In the first place, I work out the interpretation of results on *negative competition effects*. For this, as a first step, I use model (9) in Table 5 to compute percentage change in expected value of export of affected emerging country  $c$  in six-digit industry  $i$  if the number of export incentives implemented by BIC country  $Y$  in that six-digit industry, denoted by  $Y\_EI_{it}$  in equation (2), increases from 0 to 1 whereas similarity index, denoted by  $GEO\_ESI_{(c\_Y)i,0408}$  in equations (2) and (3), is fixed at its actual mean value (0.08 for Brazil, 0.08 for India and 0.11 for China; taken from Table 4). All other variables are fixed at their mean values. The results are reported in the second row in Table 7.

As a second step, I multiply these percentages by average export share of six-digit industry  $i$  (which equals to  $0.000198 [1/5051^8]$ ) so that we could see the magnitude (on average) of the respective negative effects for total export of affected country. The results are reported in the third row of Table 7. They indicate that *negative competition effects* coming from one additional Brazilian, Indian or

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<sup>8</sup> 5051 is the number of six-digit industries (HS6 2007) used in the study.

Chinese incentive on average cause the drop in total export of affected emerging country by 0.00013, 0.00024 or 0.0013%, respectively. Finally, I multiply the resultant percentages by average annual number of BICs export incentives in force at six-digit industry level in 2009-2015<sup>9</sup> (reported in the fourth row of Table 7) to get annual percentage changes in total export of affected emerging country caused by BICs export incentives in force in 2009-2015 due to *negative competition effects*. In particular, according to computations, Brazilian, Indian and Chinese export incentives in force in 2009-2015 have caused, on average, annual drop in total export of affected emerging country by 0.20, 1.57 and 6.47%, respectively.

**Table 7 Quantifying *negative competition effects* of BICs export incentives: Percentage changes in expected value of export of affected emerging country on average**

Country of incentive $\in$	Brazil	India	China
1) Actual mean value of similarity index $GEO\_ESI_{(c\_Y)i,0408}$	0.08	0.08	0.11
2) Percentage change/drop in expected value of export of affected country $c$ in six-digit industry $i$ with additional BICs export incentive targeted at six-digit industry $i$ due to negative competition effects	-0.68%	-1.22%	-6.45%
3) Percentage change in the row (2) multiplied by average export share of six-digit industry $i$ (=0.000198)	-0.00013%	-0.00024%	-0.0013%
4) Average annual number of BICs export incentives in force at six-digit industry level in 2009-2015	1457.71	6497.83	5064.43
5) Annual percentage change/drop in total export of affected emerging country due to negative competition effects of BICs export incentives in force in 2009-2015 {(3) multiplied by (4)}	-0.20%	-1.56%	-6.47%

Note: Computation of expected values of export are based on model (9) in Table 5.

As we can see from Table 7, largest *negative competition effects* come from Chinese export incentives, smallest – from Brazil. If to look at per industry effects

<sup>9</sup> For this, first, I sum up export incentives over affected six-digit industries and by year of being in force for the period of 2009-2015. Next, I compute simple average over the period. If export incentive is in force only several months in a particular year, i.e. less than one year, I count for it by  $1/12*z$  where  $z$  is duration of the export incentive in months.

of one incentive (second row in the Table), on average, *negative competition effects* of Chinese export incentives are expected to be 9.5 and 5.3 times higher than negative effects of Brazilian and Indian export incentives, respectively. If to look at total negative effects of all BICs incentives in force in 2009-2015 on annual basis (fifth row in the Table), Chinese negative effects are 32.4 and 4 times higher than Brazilian and Indian negative effects, respectively.

Interpretation of *positive “GVCs linkages” effects* is way more complicated. Respective variables are weighted averages of export incentives implemented by each BIC country in all six-digit input industries and, hence, standard procedure of computation of percentage change of expected value of export with additional export incentive cannot be applied. Hence, to make interpretation of the results on *positive “GVCs linkages” effects* clearer we need a special computational procedure.

First, I assume that in some year  $t=0$  there were no export incentives in force targeted at inputs in country Y (one of BICs). Then the respective indicator of positive effects  $PE(Y\_EI)_{ic}$ , determined by equation (4), equals to zero for all observations and, hence, its mean value equals to zero as well. Thereafter I compute expected value of export in year  $t=0$  using model (9) of Table 5 with  $PE(Y\_EI)_{ic}$  equaling to zero and other variables being fixed at their mean values.

Second, assuming that one export incentive targeted at one six-digit input industry j (HS6 2007) comes into force in country Y in year  $t=1$ , I compute all observations of  $PE(Y\_EI)_{ic}$  and its mean value over all observations. However, according to BEC-HS6 2007 conversion table, there are 3146 six-digit industries, which represent intermediate goods or inputs. Hence, I need to repeat this step for each six-digit input industry. As a result, I have 3146 mean values of  $PE(Y\_EI)_{ic}$ . I compute mean value of these 3146 mean values. After that, I compute expected

value of export using model (9) of Table 5 with resultant/final iterated mean value of  $PE(Y\_ED)_{ic}$  and other variables being fixed at their mean values.

Lastly, I can compute percentage change between expected values of export in  $t=1$  and  $t=0$ . This percentage change reflects change on average in expected value of export of affected emerging country  $c$  in affected six-digit industry  $i$  (HS6 2007) in case if additional export incentive targeted at one six-digit input industry  $j$  (HS6 2007) comes into force in country  $Y$  in some year  $t=1$ . The results for three BICs are reported in the first row of Table 8 below. Next, I multiply these percentage changes by average export share of six-digit industry  $i$  (which equals to 0.000198 as above) that we could see the magnitude (on average) of the respective “per industry” positive effects for total export of affected country (reported in the second row of Table 8). We can see that the resultant percentage changes are very small. This is because they reflect changes in total export due to positive effects in one affected six-digit industry  $i$  on average. However, inputs represented by one six-digit industry  $j$  can be used in many six-digit industries  $i$  for production and, hence, the number of affected six-digit industries  $i$  is larger than one. Accordingly, to get fuller picture about the magnitude of *positive “GVCs linkages” effects* we would need to know average number of affected via GVCs linkages six-digit industries  $i$  in affected emerging country  $c$  by one additional export incentive targeted at one six-digit input industry  $j$  implemented in a BIC country. For this, I use country columns on shares of import of country  $c$  from country  $Y$  in total import of country  $c$  in six-digit input industry  $j$  (HS6 2007),

$\frac{Im_{j,0408,from.Y.to.c}}{Im_{j,0408,c}}$ , and matrix of  $DR_i^j$ , direct requirement of input from six-digit industry  $j$  (HS6 2007) in production of one unit in six-digit industry  $i$  (HS6 2007), both used in the computation of parameters of *positive “GVCs linkages” effects* above. The computational algorithm is the following:

**Step 1**

$$NI_{i^1 j}^{j c Y} = \overset{\circ}{a} DR_i^j \cdot Im Sh_{jYc(0408)} \begin{cases} \text{if } DR_i^j > 0, DR_i^j = 1 \\ \text{if } DR_i^j = 0, DR_i^j = 0 \\ \text{if } Im Sh_{jYc(0408)} > 0, Im Sh = 1 \\ \text{if } Im Sh_{jYc(0408)} = 0, Im Sh = 0 \end{cases} \overset{\ddot{u}}{b}$$

$$\text{where } Im Sh_{jYc(0408)} = \frac{Im_{j,0408, from .Y.to.c}}{Im_{j,0408,c}}$$

(6),

where  $NI_{i^1 j}^{j c Y}$  is the number of six-digit industries  $i^1 j$  (HS6 2007) in affected country c, which potentially can use inputs from six-digit industry j (HS6 2007) produced in country Y.

**Step 2**

I compute mean values of  $NI_{i^1 j}^{j c Y}$  over Y (i.e. for each BIC country denoted by Y). These will be average numbers of affected six-digit industries i in affected emerging country c by one export incentive targeted at one six-digit input industry j implemented in each BIC country due to *positive “GVCs linkages” effects*. They are reported in the third row of Table 8. In the fourth row, I multiply numbers in the second and third rows to get percentage changes in expected value of total export of affected emerging country c as a result of one additional export incentive targeted at one six-digit input industry j implemented in each BIC country.

Finally, I multiply percentages in the fourth row by average annual number of BICs export incentives targeted at inputs at six-digit level in force in 2009-2015 (BEC-HS6 2007 conversion was used to determine input industries). The respective



average annual numbers of BICs incentives aimed at inputs are reported in the fifth row and final percentages – in the six row of Table 8. The resultant percentages indicate that due to *positive “GVCs linkages” effects* of Indian and Chinese export incentives targeted at inputs in force in 2009-2015 total export of affected emerging country has been increasing annually on average by 0.43 and 16.4%, respectively. Though results for Brazil are also reported and they suggest negative instead of positive effects, we do not discuss them as the respective coefficient in model (9) of Table 5 is not statistically significant.

**Table 8 Quantifying positive “GVCs linkages” effects of BICs export incentives: Percentage changes in expected value of export of affected emerging country on average**

Country of incentive $\ominus$	Brazil	India	China
1) <i>Percentage change in expected value of export of affected country c in affected six-digit industry i with additional BICs incentive targeted at six-digit input industry j due to positive “GVCs linkages” effects</i>	-0.00084%	0.00086%	0.027%
2) <i>Percentage change in (1) multiplied by average export share of six-digit industry i (=0.000198)</i>	-1.66629E-07%	1.69977E-07%	5.37506E-06%
3) <i>Average number of affected six-digit industries i in country c, <math>NI_{j,cY}</math></i>	545.45	695.94	1060.6
4) <i>Percentage change in (2) multiplied by (3);</i>	-9,0888E-05%	0.000118%	0.005700793%
5) <i>Average annual number of BICs export incentives targeted at inputs at six-digit industry level in force in 2009-2015</i>	902.96	3626.14	2876.19
6) <i>Annual percentage change in total export of affected emerging country due to positive “GVCs linkages” effects of BICs export incentives in force in 2009-2015 {(4) multiplied by (5)}</i>	-0.08%	0.43%	16.4%

*Note:* Computation of expected values of export are based on model (9) in Table 5.

*Positive “GVCs linkages” effects* of Chinese export incentives targeted at input industries look extraordinary large. In general, we could expect very large positive effects of Chinese export incentives as China is one of the leading exporter of intermediate goods in the World (along with USA). In particular, its share in intermediate World export in 2015 was 9.83% (for USA the respective share equaled to 9.85%). This means that Chinese inputs have broader usage in production in other countries than inputs of any other origin (except of US origin) and, hence, increase in their availability, quality and variety in the world markets due to domestic export incentives should have stronger and larger effects on foreign producers.

In Table 9 I present cumulative effects of BICs export incentives (as simple arithmetic sums of respective positive and negative effects) for the whole sample.

**Table 9 Annual percentage change in total export of affected emerging country due to cumulative effects of BICs export incentives in force in 2009-2015**

Country of incentive è	Brazil	India	China
Negative effects	-0.20%	-1.56%	-6.47%
Positive effects	-0.08% è 0*	0.43%	16.40%
<b>Cumulative effects</b>	<b>-0.20%</b>	<b>-1.13%</b>	<b>9.93%</b>

As can be seen negative cumulative effects come from Brazilian and Indian export incentives and positive cumulative effects - from Chinese incentives. Cumulative effects of Brazilian incentives just equal to their *negative competition effects* (as reported in Table 7) as positive effects, according to this study, equal to zero.

### ***6.3. Regional differentiation of effects***

In this section, I test if intensity of respective negative and positive effects of BICs export incentives differ for countries, which locate in the same geographical region as country-source of incentives. In particular, it could be suggested that due to high importance of regional value chains *positive “GVCs linkages” effects* might be more intensive/stronger for these countries. More specifically, *positive “GVCs linkages” effects* of Brazilian export incentives might be more intensive/stronger for Latin American countries while of Indian and Chinese incentives – for Asian countries. To test this I introduce into baseline equation (1) dummies for Asian and Latin American countries and interact them with respective indicators of negative and positive effects of Indian, Chinese and Brazilian incentives. The results are reported in Table 10.

**Table 10 Results with regional differentiation of effects**

	Model 1	Model 2	Model 3	Model 4	Model 5
$LnEX_{i,t-1,c}$	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***	0.11 (0.001)***
$NE(BR\_EI)_{itc}$	-0.085 (0.066)	-0.081 (0.066)	-0.079 (0.066)	-0.254 (0.103)**	-0.249 (0.103)**
$NE(IN\_EI)_{itc}$	-0.153 (0.023)***	-0.183 (0.028)***	-0.151 (0.023)***	-0.149 (0.023)***	-0.172 (0.028)***
$NE(CH\_EI)_{itc}$	-0.606 (0.179)***	-0.614 (0.179)***	-1.299 (0.257)**	-0.582 (0.179)***	-1.255 (0.258)***
$PE(BR\_EI)_{itc}$	-0.035 (0.032)	-0.036 (0.032)	-0.037 (0.032)	-0.042 (0.032)	-0.046 (0.032)
$PE(IN\_EI)_{itc}$	0.035 (0.016)**	0.032 (0.016)**	0.036 (0.016)**	0.036 (0.016)**	0.033 (0.016)*
$PE(CH\_EI)_{itc}$	1.212 (0.193)***	1.191 (0.193)***	1.133 (0.2)***	1.186 (0.193)***	1.083 (0.201)***
D_Asia		Omitted <sup>g</sup>	Omitted	Omitted	Omitted
D_LatinA		Omitted	Omitted	Omitted	Omitted
NE_IN*D_Asia		0.057 (0.032)*			0.046 (0.033)
PE_IN*D_Asia		0.027 (0.015)*			0.031 (0.016)*
NE_CH*D_Asia			1.012 (0.276)***		0.974 (0.0277)***
PE_CH*D_Asia			0.076 (0.18)		0.075 (0.185)
NE_BR*D_LatinA				0.222 (0.111)*	0.227 (0.111)**
PE_BR*D_LatinA				0.11 (0.038)***	0.122 (0.038)***
N.obs.	620 727	620 727	620 727	620 727	620 727
Adj. R-sq.	0.8575	0.8575	0.8575	0.8575	0.8575

**Note:** (1) \* if  $p < 0.10$ , \*\* if  $p < 0.05$ , \*\*\* if  $p < 0.01$ ; (2) standard errors in parentheses; (3) “Country by year”, “country by industry” and “year by industry” fixed effects are included in all models; (4) Constant is not reported by Stata for *reghdfe* command; (5) <sup>g</sup> - omitted due to collinearity.

Firstly, as expected there is evidence that Brazilian and Indian export incentives exhibit stronger/more intensive *positive “GVCs linkages” effects* on export of emerging countries, which locate in the same geographical region (Latin American and Asian countries, respectively). Literally, this means that Brazilian/Indian export incentives in six-digit input industries  $j$  will have larger positive effects on export in six-digit industry  $i$  of Latin American/Asian country than of country located in other region taken that the degree of usage of subsidized inputs in industry  $i$  is the same in all countries. However, only for Brazilian incentives, the respective result is highly statistically significant; for Indian incentives, the significance is only marginal. Hence, it can be concluded that Latin American

emerging countries seem to have significantly more important value chains` linkages with Brazil than emerging countries in Asia and Europe. However, this conclusion is only marginally valid for India and Asian versus other emerging countries and not valid at all for China and Asian versus other emerging countries. The latter result might confirm China`s rise as a global actor in international production networks rather than regional.

Secondly, we find that *negative competition effects* of Chinese and Brazilian export incentives are significantly smaller for their geographical neighbors, Asian and Latin American emerging countries, respectively, than for other emerging countries. There is the same evidence for Indian incentives but it is only marginally statistically significant in model (2) of Table 10. Though these results might look at first as counterintuitive, they can have plausible explanation. In particular, differences in export goods` quality, branding and labor and other costs (i.e. factors of goods` competitiveness) between geographical regions (Asia, Latin America and Emerging Europe) might be behind this phenomenon. For example, if China/Brazil implements export incentives for goods of Asian/Latin American specialization in general, then their negative effects for the same goods produced in Asia/Latin America can be expected to be smaller than for these goods produced elsewhere due to their higher competitiveness in the world markets in general.

In Table 11 I summarize negative, positive and cumulative effects of BICs export incentives computed based on model (5) of Table 10. Computations have been performed using the algorithms described above but with different coefficients and mean values for different groups of countries. While computing negative effects, mean values of similarity indices for respective groups of emerging countries were used instead of mean values across all emerging countries. While

computing positive effects, final (iterated) mean values of  $PE(Y_{-ED})_{ic}$  were computed for respective groups of countries.

**Table 11 Negative, positive and cumulative effects of BICs export incentives in force in 2009-2015**

Country of incentive è	Brazil			India			China		
	All*	Latin American	Other	All*	Asian	Other	All*	Asian	Other
Affected countries									
Negative effects	-0.2%	-0.09%	-0.39%	-1.56%	-3.02%	-1.47%	-6.47%	-5.63%	-8.78%
Positive effects	0%	0.29%	0%	0.43%	0.79%	0.4%	16.40%	15.47%	14.34%
<b>Cumulative effects</b>	<b>-0.2%</b>	<b>0.2%</b>	<b>-0.39%</b>	<b>-1.13%</b>	<b>-2.23%</b>	<b>-1.07%</b>	<b>9.93%</b>	<b>9.84%</b>	<b>5.56%</b>

Note: (1) \*Result for total sample are taken from Table 8; (2) Coefficients in model (5) of Table 10 which are not statistically significant were set to equal to 0.

The most remarkable differences are found for the effects of Brazilian export incentives. In particular, *negative competition effects* of Brazilian incentives are significantly smaller for Latin American countries than for other emerging countries. This outcome is totally due to the difference in respective coefficients. In particular, if Brazil implements export incentive in a six-digit industry  $i$ , and say Chile and Estonia have just the same export similarity indices of geographical distribution with Brazil for this six-digit industry, Estonian export in six-digit industry  $i$  will be hurt significantly more by competition from subsidized Brazilian product than Chilean export.

*Positive "GVCs linkages" effects* are found only for Latin American countries. As a result, cumulative effects of Brazilian incentives are even positive for Latin American countries (albeit small) but negative for other emerging countries.

Indian export incentives seem to have significantly larger *negative competition effects* for Asian countries. It should be noted that this difference is totally due to larger similarity of geographical distribution of exports of India and other Asian countries as the respective interaction term (between indicator of negative effects of Indian incentives and dummy for Asian countries) is not statistically significant. As a result, negative cumulative effects of Indian incentives are larger for Asian countries than for other emerging countries in spite of the fact that *positive GVCs linkages effects* of Indian incentives are larger for Asian countries.

Finally, Chinese export incentives exhibit significantly smaller *negative competition effects* for Asian than for other emerging countries. This outcome is totally due to the difference in respective coefficients. In particular, if China implements export incentive in a six-digit industry *i*, and say Malaysia and Estonia have just the same export similarity indices of geographical distribution with China for this six-digit industry, Estonian export in six-digit industry *i* will be hurt significantly more by competition from subsidized Chinese product than Malaysian export.

## 7. CONCLUSIONS

Though effects of export incentives for third countries' export is a subject undergoing intense discussion, systematic empirical evidence on the third-country effects of export incentives have been lacking. Firstly, it can be due to their duality as according to existing theory these effects can be both negative and positive. In this paper, I have overcome this difficulty by introducing separate indicators for negative and positive third-country effects of export incentives. Secondly, large-scale data on export incentives at detailed industrial level has become available only recently.

In this paper, I have shown empirically that export incentives implemented in one country can have both negative and positive effects on exports of other countries as trade theory suggests. Negative effects emerge due to increased competition in international markets and positive – via input-output GVCs linkages. In the empirical test, I examine how recently implemented BICs (Brazil, India and China) export incentives affected export of other large emerging economies (the set includes Asian, Latin American and European countries).

I found that largest third-country *negative competition* and *positive “GVCs linkages” effects* come from Chinese export incentives. This is not surprising taking into account China’s supreme role in modern international trade. Respective negative and positive effects are also significant for Indian export incentives. Important finding is that cumulative effects (as sum of negative and positive effects) are positive for China and negative for India. Literally, this means that while Indian export incentives are in general harmful for exports of other emerging countries, Chinese export incentives seem to enhance their exports eventually. For Brazilian export incentives, the evidence on negative effects is not strong and is actually absent for positive effects in the whole sample. However, there is rather convincing evidence that negative effects of Brazilian incentives are significantly smaller and positive effects are significantly larger for Latin American countries. The former result points to the existence of regional export specialization whereas the latter – to the importance of regional value chains. Similarly, negative effects of Chinese incentives have been found to be significantly smaller for Asian than for non-Asian emerging countries though no statistically significant difference between these groups of countries was found for positive effects of Chinese incentives. The former result indicates the importance of Asian export specialization while the latter points to the preliminary conclusion that at present China does not participate significantly more intensively in Asian value chains compared to global value chains.



The results have policy implications. In particular, though there is clear evidence on *negative competition effects* of export incentives for third countries' export, the results also indicate that they can be at least partially compensated by *positive effects transmitted via GVCs*. Literally, this means that in certain cases participation in GVCs can help countries, and developing countries in particular, in standing out against discriminatory trade policies.

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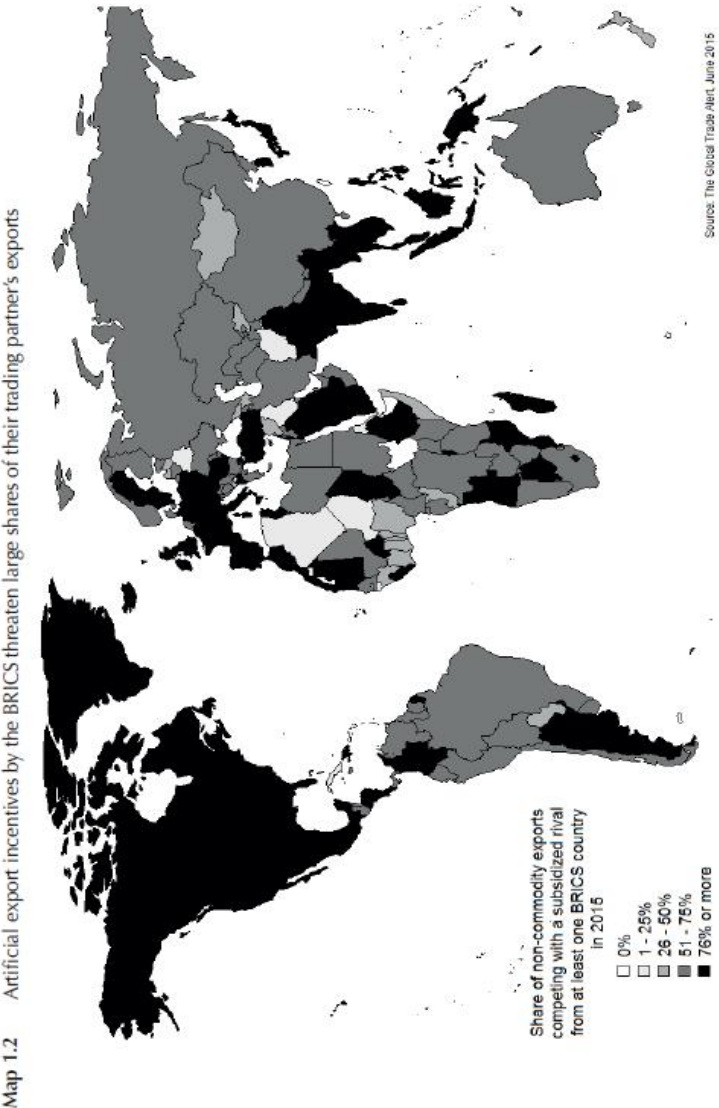
## APPENDICES

### *Appendix 1*

**Table A1.1 List of emerging countries used in the study**

<b>European emerging countries</b>	<b>Asian emerging countries</b>	<b>Latin American emerging countries</b>
Czech Republic Estonia Greece Hungary Poland Russia Turkey	Indonesia Malaysia South Korea Thailand Viet Nam	Argentina Chile Colombia Mexico Peru Uruguay

Appendix 2



Source: Directly copied from Evenett (2015)

### Appendix 3

**Table 3.1. Descriptive statistics**

Variable	N.obs	Mean	St. Dev.	Min	Max
$LnEX_{t,c}$	712 191	10.44	6.09	0	25.92
$NE(BR\_EI)_{it}$	635 915	0.03	0.10	0	2.58
$NE(IN\_EI)_{it}$	636 097	0.16	0.45	0	9.47
$NE(CH\_EI)_{it}$	636 062	0.13	0.25	0	4.10
$PE(BR\_EI)_{it}$	636 426	0.40	0.42	0	2.74
$PE(IN\_EI)_{it}$	636 426	1.44	1.33	0	7.65
$PE(CH\_EI)_{it}$	636 426	0.73	0.41	0	2.31

**Table 3.2. Correlation matrix**

	$LnEX_{t,c}$	$NE(BR\_EI)_{it}$	$NE(IN\_EI)_{it}$	$NE(CH\_EI)_{it}$	$PE(BR\_EI)_{it}$	$PE(IN\_EI)_{it}$	$PE(CH\_EI)_{it}$
$LnEX_{t,c}$	1.00						
$NE(BR\_EI)_{it}$	0.16	1.00					
$NE(IN\_EI)_{it}$	0.25	0.13	1.00				
$NE(CH\_EI)_{it}$	0.32	0.10	0.30	1.00			
$PE(BR\_EI)_{it}$	0.05	0.15	0.06	0.03	1.00		
$PE(IN\_EI)_{it}$	0.03	0.09	0.19	0.04	<b>0.54</b>	1.00	
$PE(CH\_EI)_{it}$	-0.01	0.04	0.03	0.05	0.43	0.46	1.00

Note: Correlation coefficients, which exceed 0.5 are denoted by bold.



## Long Online Appendix

### GTA export incentives used in the study

#### Brazil

<i>N.</i>	<i>Title</i>	<i>Type*</i>	<i>Description (copied directly from GTA database)</i>	<i>Inception date</i>	<i>Removal date</i>	<i>Number of affected sectors**</i>	<i>Number of affected countries</i>
1	Integrated Drawback Suspension - new module for drawback system	Tax-based export incentive	<p>On 27 April 2010, Brazil's drawback system for export goods was renewed and extended by Joint Ordinance (Portaria Conjunta) no. 467/2010.</p> <p>The drawback system already existed before 2008 and includes various modules. The system applies to exporters who in turn receive a possibility to defer the payment of various taxes on goods that they used in the manufacturing process. Exporters may defer the import tax (II), federal excise tax (IPI), Social Integration Program contribution (PIS), and Contribution for Social Security Financing (COFINS). If a Brazilian company's final good is exported, this deferral may be turned into an exemption. Therefore exporters are effectively exempted from the payment of the stated taxes.</p> <p>The Joint Ordinance no. 467/2010 regulates a new drawback module called Integrated Drawback Suspension. Three aspects in this Joint Ordinance are new to the drawback system:</p> <ol style="list-style-type: none"> <li>1. Tax suspension applies to the acquisition of goods used in the manufacturing of intermediary products, i.e., which are later supplied to the exporter, can be purchased in the domestic market. Previously, tax suspensions for intermediary goods were only granted in case the good was imported.</li> <li>2. Tax suspension applies to the acquisition of goods for use in repair, breeding, cultivation, or extraction activities of a product which will be exported.</li> <li>3. The tax suspension limit was extended up to 5 years for inputs used in the production of capital goods.</li> </ol>	27 Apr 2010	Open ended	31	189
2	New credit line for exports of consumer goods	Trade finance	<p>The Brazilian Development Bank (BNDES) implemented a new credit line amounting to BRL 7 billion (ca. USD 4.2 billion) for the pre-shipment phase of exports of consumer goods, in a decision announced on 29 April 2010. The initial interest rate is 7% per year until the end of June when it will be increased to 8% per year.</p> <p>It is worth noting that on 29 April 2010 the Brazilian central bank's target overnight interest rate was 9.5%, suggesting a degree of subsidization is factored into the credit line.</p>	30 Apr 2010	30 Mar 2011	65	Not specified
3	Special tax refund programme REINTEGRA for exporters of locally produced	Tax-based export incentive	<p>On 2 August 2011, Brazil's President Dilma Rousseff issued Provisional Measure (PM) no. 540 which was approved by the National Congress and converted into Law no.12.546 on 14 December 2011.</p> <p>The measure introduced the Special Regime for the Reinstatement of Taxes for Exporters (Regime Especial de Reintegração de Valores Tributários para as Empresas Exportadoras), also known as REINTEGRA. The program gives exporters of domestically manufactured goods a tax refund between 0% to 3% of the value of</p>	03 Aug 2011	01 Nov 2013	137	199

	manufactured goods		<p>their exports, which then can be used either as a credit against their taxes or as a cash payment.</p> <p>The goods eligible to profit from the REINTEGRA regime are listed in the annex of Decree no. 7.633/2011 and require a certain amount of local content, i.e. imported inputs should not exceed 40% (for some other products it is 65%) of the final product value. Inputs from the MERCOSUR are treated as of Brazilian origin.</p> <p>On 28 December 2012, the program was extended by PM no. 601 until 31 December 2013. Since the Senate failed to approve the presidential act in due time, the extension of the program was introduced again, just before PM no. 601 was about to expire. The new PM, no. 610, was then consecutively approved by the National Congress and turned into Federal Law no. 12.844 on 19 July 2013.</p> <p>Please note that Brazil only exported on a subset of the eligible tariff lines in the year prior to implementation.</p>				
4	Drawback on exported products based on oil	Tax-based export incentive	<p>On 16 May 2013, the Ministry of Foreign Trade adopted Decree 8.010 introducing drawbacks on domestically produced goods for export which are based on imported oil (or oil derivatives), such as plastic and other chemical products. The Decree suspends the import duty, tax on industrialized goods (IPI), PIS/Pasep, Cofins, PIS/Pasep-Import, and Cofins-Import. The measure took effect on 17 May 2013.</p>	17 May 2013	Open ended	5	Not specified
5	Reform of the national Export Financing Programme PROEX	Trade finance	<p>On 26 December 2013, the Brazilian Foreign Trade Board (CAMEX) issued Resolution No. 126, replacing Resolution No. 45 of 2009 and reforming the Export Financing Programme (PROEX) for Brazilian companies. The programme attempts to reduce the national trade deficit by increasing export-led growth. It is financed by the Brazilian National Bank (Banco do Brasil) and intends to provide Brazilian export companies with financial conditions, comparable to those on the world market.</p> <p>All exporting companies with a gross revenue of BRL 90 million (USD 34 million), up from BRL 60 million (USD 23 million), are eligible for PROEX financing. Furthermore, the programme now also covers marketing companies with a gross revenue of BRL 600 million (USD 225 million) and is applicable to a large amount of exported goods and services.</p> <p>The reform went into effect on 30 December 2013.</p>	30 Dec 2013	Open ended	157	200
6	Reestablishment of REINTEGRA tax refund program for exporters	Tax-based export incentive	<p>On 9 July 2014, the President of Brazil issued Provisional Measure (PM) no. 651 reintroducing the REINTEGRA program which had originally been terminated on 31 December 2013. The PM, which was transformed into Decree no. 8.304 on 12 September 2014, does not stipulate an expiration date. The affected products are listed in the annex of the Decree.</p> <p>On 27 February 2015, Decree 8.415 reduced the current maximum tax refund of 3% to 1% for the period of 1 March 2015 until 31 December 2016 and then to 2% for the year 2017. In 2018 the tax refund of 3% is supposed to be reestablished. The measure was taken in light of the fiscal constraints that the country is facing. Please note that Brazil only exported on a subset of the eligible tariff lines in the year prior to implementation.</p>	10 Jul 2014	Open ended	136	193
7	Introduction of export tax credit for Brazilian sugar and	Tax-based export incentive	<p>On 10 September 2014, the Brazilian Finance Minister Guido Mantega informed the media, that the Brazilian Government decided to introduce an export credit on sugar and ethanol exports. The credit rate will be at 0.3% of the total export value and part of the REINTEGRA regime (already explained in #4593). The aim of this</p>	10 Sep 2014	Open ended	5	Not specified

	ethanol producers		measure is to increase demand for Brazilian biofuel. According to Mantega, the rate will be lifted to 3% in 2015.				
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Note:\*In GTA database there are three types of export incentives: trade finance which includes export subsidies of all types, taxed-based export incentive and other export incentives; \*\* three digit HS 2012 sectors.

## China

N.	Title	Type*	Description (copied directly from GTA database)	Inception date	Removal date	Number of affected sectors**	Number of affected countries
1	Increased VAT rebates for exports of food, mineral, chemical and wood products	Tax-based export incentive	On 1 November 2008, the government of China raised the Value Added Tax (VAT) rebates for designated exports. Exporters of the benefiting products may recuperate up to 80 percent of the VAT included in intermediate products.  The general VAT in China is equal to 17 percent.	01 Nov 2008	Open ended	43	Not specified
2	Full VAT rebate for watch component exports	Tax-based export incentive	On 1 December 2008, the government of China raised the Value Added Tax(VAT) rebates for exports of watch components. Exporters of the benefiting products may recuperate the full VAT included in intermediate products. The general VAT in China is equal 17 percent.	01 Dec 2008	Open ended	1	Not specified
3	Increased VAT rebates for food, textiles, wood products, metals, chemicals and machinery	Tax-based export incentive	On 1 December 2008, the government of China raised the Value Added Tax(VAT) rebates for designated exports. Exporters of the benefiting products may recuperate up to 80 percent of the VAT included in intermediate products. The general VAT in China is equal 17 percent.	01 Dec 2008	Open ended	72	Not specified
4	VAT Exemption for the Export of Black Bean	Tax-based export incentive	On 3 December 2008, the Ministry of Finance and the State Administration of Taxation jointly issued the Circular on the VAT Exemption on Black Bean Exportation (Caishui '2008' No.154). Starting from 1 December 2008, exports of black bean (HS 1201.00.92.00) were exempted from VAT payments.	01 Dec 2008	Open ended	1	Not specified
5	Increased VAT rebates for 553 products	Tax-based export incentive	On 1 January 2009, the government of China raised the Value Added Tax(VAT) rebates for designated exports. Exporters of the benefiting products may recuperate up to 80 percent of the VAT included in intermediate products. A total of 161 products has been granted a full rebate of 100 percent. The general VAT in China is equal 17 percent.	01 Jan 2009	Open ended	32	Not specified
6	VAT rebate of 15 percent for textile products	Tax-based export incentive	On 1 February 2009, the government of China raised the Value Added Tax (VAT) rebates for designated textile and garment exports. Exporters of the benefiting products may recuperate 88 percent of the VAT included in intermediate products. Instead of the general Chinese VAT of 17 percent,	01 Feb 2009	Open ended	18	Not specified

			intermediates used in these exports shall only be subject to a VAT of 2 percent.				
7	Increased VAT rebates for exports	Tax-based export incentive	<p>On 1 April 2009 China's Ministry of Finance and State Administration of Taxation published a Notice in which it was stated that the rebates to exporters from Value Added Tax (VAT, currently running at 17 percent in China) would be increased for enumerated products.</p> <p>Exporters of a wide range of products may now reclaim the a share of the VAT included in the intermediates used in final goods production.</p>	01 Apr 2009	Open ended	32	Not specified
8	Increased VAT rebates for exports	Tax-based export incentive	<p>On 1 April 2009 China's Ministry of Finance and State Administration of Taxation published a Notice in which it was stated that the rebates to exporters from Value Added Tax (VAT, currently running at 17 percent in China) would be increased for enumerated products.</p> <p>Exporters of a wide range of products may now reclaim the a share of the VAT included in the intermediates used in final goods production.</p>	01 Apr 2009	Open ended	41	Not specified
9	VAT rebates for more than 2600 products	Tax-based export incentive	<p>On 3 June 2009, the government of China raised the Value Added Tax(VAT) rebates for designated textile and garment exports. Exporters of the benefiting products may recuperate part of the VAT included in intermediate products.</p> <p>Instead of the general Chinese VAT of 17 percent, intermediates used in these exports shall only be subject to a VAT of 2 to 12percent. 130 products have been exempted from VAT on included intermediates altogether.</p>	01 Jun 2009	Open ended	101	Not specified
10	Tax refunds for exported vessels	Tax-based export incentive	<p>On 30 March 2010, the Ministry of Finance, General Administration of Customs and State Administration of Taxation issued the "Notice about Carrying out the Pilot Program on Export Tax Refunds for the Leased-financed Vessels in Tianjin" (Caishui'2010'No.24).</p> <p>According to this Notice, the value added tax on the exported vessel through financial lease shall be exempted and the tax paid under the item of input tax at the time of purchase shall be refunded. All consumption taxes paid on the taxable consumer goods (export leasing purpose only) shall be refunded.</p>	01 Apr 2010	Open ended	1	67
11	Recognition of Key Software Manufacturers and Integrated Circuit Design Firms within the State's Industry Layout Plan	Tax-based export incentive	<p>On 4 September 2013, the Ministry of Commerce, Ministry of Finance, Ministry of Industry and Information Technology, State Administration of Taxation and National Development and Reform Commission jointly released the "Interim Measures for the Recognition and Administration of the Key Software Enterprises and Integrated Circuit Design Enterprises Covered by the National Planning Layout Scheme" (Fagaibangaoji'2013' No.2127).</p> <p>Under Chapter 2, Article 6.3 of this document, software producers with annual exports no less than USD 5 million and export income accounting for more than 50% of its total annual income are eligible to apply for the Key Software Enterprises status covered by the National Planning Layout Scheme.</p> <p>Qualified Key Enterprises are granted with Corporate Income Tax reductions according to the Notice on Enterprise Income Tax Policies for Further Encouraging the Development of Software and Integrated Circuit Industries. (Caishui'2012' No.27).</p>	02 Sep 2013	Open ended	4	77

			The described scheme is an implementation of the Notice of the Ministry of Finance and the State Administration of Taxation on Enterprise Income Tax Policies for Further Encouraging the Development of Software and Integrated Circuit Industries (Caishui'2012' No.27).				
12	VAT exemption on spacecraft industry	Tax-based export incentive	On 15 June 2015, the Ministry of Finance issued Notice No. 66 of 2015 to support the development of the Chinese spacecraft industry. According to the Notice, companies providing space transportation services, spacecraft maintenance services, spacecraft & parts production, as well as spacecraft & parts exported after 1 January 2014 are eligible for the VAT refund. Retroactively, services and products delivered in 2013 are also eligible for the VAT refund, regardless of the previous contract signing date. Specific mention is made in the Notice of VAT refunds for exporters and for VAT rebates on imported parts and components, but the scope of the Notice does not appear to be limited to exports.	01 Jan 2014	Open ended	3	72
13	Nationwide VAT & Consumption Tax Refunds on Exported Vessels under Financial Leasing	Tax-based export incentive	On 1 October 2014, China extended the tax refund policy on leased vessels and marine structures nationwide. The policy was previously restricted to a pilot program in the Tianjin area (see related measure). Companies registered in China that export such vessels can now reclaim part of the expenditure on their inputs. All vessel-leasing and marine structure contracts to foreign renters with a minimum duration of 5 years are entitled to the new national VAT refund policy. The eligible vessels include planes, engines, trains, etc. All exported goods purchased for leasing purposes can also benefit from consumption tax refund. For more detail definition and refund calculation, please refer to the Notice No. 50 of 2008 and Notice No. 39 of 2012, issued by State Administration of Taxation.	01 Oct 2014	Open ended	1	68
14	New export VAT rebates on pearl-, gem- and some metal-based products	Tax-based export incentive	On 9 December 2014, the Ministry of Finance issued Notice No. 98 to include pearl-, gem- and some metal-based products to its VAT rebate policy. Exported products containing 80% of the above-mentioned materials can now benefit from 5% of the VAT rebates. This new policy will be effective on 1 January 2015. Affected HS Codes: 71012290, 71022100, 71059000	01 Jan 2015	Open ended	2	65
15	New VAT rebates for exporters of 246 products	Tax-based export incentive	On 31 December 2014, the Ministry of Finance published Notice No. 150 to adjust the current VAT rebate policy to include exports on additional product codes. Based on the notice, 246 product sectors (635 products on the HS 6-digit level) will now benefit from 5% to 17% of the export tax rebate, including processed corn products, high value added products, and textiles. Due to a lack of recent data, the affected trading partners were identified using UN Comtrade numbers from 2013.	01 Jan 2015	Open ended	39	Not specified

Note:\*In GTA database there are three types of export incentives: trade finance which includes export subsidies of all types, taxed-based export incentive and other export incentives; \*\* three digit HS 2012 sectors.

## India

N.	Title	Type*	Description (copied directly from GTA database)	Inception date	Removal date	Number of affected sectors**	Number of affected countries
1	Interest subvention scheme for designated exports	Other export incentive	<p>Effective 1 December 2008, the Reserve Bank of India (RBI) implemented an interest rate subvention scheme for export credit in designated sectors. The interest rate subvention takes the form of a lower interest rate ceiling for export credit.</p> <p>In a more general export credit promotion scheme (see related measure), the RBI caps the interest rate on export credit at the Benchmark Prime Lending Rate (BPLR) minus 2.5 percentage points. Under the new scheme, designated sectors will receive a discount of up to 4.5 percentage points from the BPLR. However, the RBI demands that participants pay no less than 7 percent after the subvention.</p> <p>The sectors eligible for the subvention are enumerated as:</p> <ol style="list-style-type: none"> <li>1. Textiles (including Handloom)</li> <li>2. Handicrafts</li> <li>3. Carpets</li> <li>4. Leather</li> <li>5. Gems and Jewellery</li> <li>6. Marine Products, and</li> <li>7. Small &amp; Medium Enterprises (defined as enterprises with invested capital worth less than Rs. 100 million (USD 2 million).)</li> </ol> <p>The subvention amount of 2 percentage point has been extended repeatedly until 31 March 2011. After a liberalization of the export credit market (see related measure), the RBI amended the described subvention to reflect the new reference rate on 11 October 2011.</p> <p>However, the sectoral composition of the beneficiaries has been amended repeatedly (see related measures).</p>	01 Dec 2008	30 Dec 2014	20	183
2	Extension of service tax refund for exporters	Tax-based export incentive	<p>As of 7 December 2008, the Indian government has extended its service tax refund scheme to another constituency. Now, exporters who have paid commissions to a foreign clearing or forwarding agent are also eligible for the benefits of such a refund. The maximum share of service tax to be refunded has been set at 10 percent of the freight on board (f.o.b.) value of exports. This measure will benefit firms that contract out for freight-forwarding services. On the assumption that most of these firms are small and medium sized enterprises, then the tariff lines affected are those typically associated with exports by such enterprises from India.</p>	07 Dec 2008	Open ended	30	184

3	Incentives for textile exporters	Tax-based export incentive	<p>In early 2009, the government of India has made a number of changes to its Focus Product Scheme and the Market Linked Focus Product Scheme in the textile sector. The Focus Product Scheme was initially designed in 2006 and seeks to incentivize textile producers to engage in exports. The Market Linked Focus Product Scheme launched in April 2008 and provides export assistance to designated products. Since the beginning of 2009, the Indian government has included the following products in these schemes.</p> <p>Since 1 January 2009, exporters of garments to Australia, Japan and Brazil may acquire a 2.5 percent incentive on exported products.</p> <p>From 23 February 2009, exporters of hand-made carpets and other textiles floor coverings may apply for a 5 percent incentive.</p> <p>For the period of 1 April 2009 to 30 September 2009, exporters of garments to the European Union and the USA may receive an incentive of 2 percent of their free on board (f.o.b.) value.</p>	01 Jan 2009	Open ended	2	87
4	Additional benefits for special products/sectors exporting to Australia, Brazil or Japan	Tax-based export incentive	<p>On 14 January 2009, the Government of India via Notification No. 78 (RE-2008) / 2004-2009 read with Public Notice No. 133 (RE-2008) / 2004-2009, declared that products and sectors exporting to those markets notified under Appendix 37D, Table 12 of the Government's Handbook of Procedures would benefit from enhanced export subsidy.</p> <p>The products in Table 12 include articles of apparel and clothing accessories under Chapters 61 and 62 of the HS Code, when exported to Japan, Australia and Brazil.</p> <p>Such exports would be eligible for duty credit scrips valued at 2.5% of FOB value of prior exports, compared with the general admissible rate of 1.25% FOB value.</p>	14 Jan 2009	Open ended	1	48
5	Export incentives for vegetable carving material, articles	Tax-based export incentive	<p>On 14 January 2009, the Government of India, vide Public Notice No. 132 (RE-2008) / 2004-2009, extended the benefits of the Vishesh Krishi and Gram Udyog Yojana (VKGUY) Scheme to worked vegetable carving material and articles.</p> <p>The benefits were declared admissible with retrospective effect from 1 April 2008.</p> <p>The VKGUY Scheme is intended to promote exports of agricultural produce, minor forest produce, etc., by providing exporters of the notified products with duty credit scrips of up to 5% FOB value of their exports. The scrips can be used for payment of import duty on specified inputs, for payment of excise duty and service tax (in some cases), and can also be sold in the market.</p> <p>The VKGUY Scheme was first operationalized in 2005, and is also a part of the Foreign Trade Policy 2009-2015.</p> <p>The implementation date is set to 14 January 2009, as trade flows may only have been affected after the announcement.</p>	14 Jan 2009	Open ended	1	11
6	Temporary benefits to Raw Cotton exporters	Tax-based export incentive	<p>On 17 February 2009, the Government of India vide Public Notice No. 146 (RE-2008) / 2004-2009 allowed exporters of raw cotton to avail of duty credit scrips equivalent to 5% of FOB value of</p>	17 Feb 2009	19 Jul 2009	1	Not specified

			<p>exports.</p> <p>The duty credit scrips are issued under the Vishesh Krishi and Gram Udyog Yojana (VKGUY) Scheme, and may be used to pay debts to the government, including various duties and taxes. Exports between 1 April 2008 and 1 July 2009 are eligible.</p> <p>Given that trade flows may only have adjusted after the announcement, the implementation date of this intervention is set to 17 February 2009.</p>				
7	Extension of export promotion scheme to certain phones and integrated circuits	Tax-based export incentive	<p>On 19 February 2009, the government of India extended its "Hi-tech Product Export Promotion Scheme" to the exporters of certain phones and integrated circuits.</p> <p>Under the scheme, import duties may be balanced against proof of exports in designated products. Products such as memory or SIM cards, cellular phones or videophones have been added to the list of eligible exports.</p>	19 Feb 2009	Open ended	7	Not specified
8	List of products eligible for export incentives amended	Tax-based export incentive	<p>On 26 February 2009, the Government of India notified certain amendments to the Foreign Trade Policy 2004-09, vide Public Notice No. 151 (RE-2008) / 2004-2009. The notification enacts the following changes to the sectoral application of Indian export incentive schemes :</p> <ul style="list-style-type: none"> <li>• Stapling machines (staplers) are introduced as a new Focus Product, benefitting from the Focus Product Scheme (FPS) (HS Code 8472, w.e.f 1 April 2008).</li> <li>• Non-wovens of man-made filaments were included in the list of New High Tech Products (HS Code 5603, w.e.f. 1 April 2008).</li> <li>• All handmade carpets and other textile coverings were removed from the Vishesh Krishi Gram Udyog Yojana (VKGUY) Scheme and brought within the ambit of the FPS. (HS Code 0057, w.e.f. 23 February 2009). This listing as a special product under the FPS and the past listing under VKGUY offer similar incentives, equivalent to 5% FOB value of past exports, with some differences in exceptions and application of the respective schemes.</li> <li>• Dried vegetables were included in the list of products eligible for the VKGUY Scheme. (HS Code 0712, w.e.f. 1 April 2008).</li> </ul> <p>The various export incentives grant duty credit scrips, valued at a percentage of the FOB value of exports made, to exporters. Duty credit scrips may be utilized for payment of duty on specified imports, for payment of excise duty or service tax in certain situations, etc. The scrips are also transferable. The implementation date has been set to 1 March 2009 as trade flows may only have been affected after the announcement.</p>	01 Mar 2009	30 Mar 2015	4	72



			The measure was replaced with the announcement of the new Foreign Trade Policy in May 2015.				
9	Marble and travertine products included in Focus Product Scheme	Tax-based export incentive	<p>On 2 March 2009, the Government of India, vide Public Notice No. 155 (RE-2008) / 2004-2009, granted benefits as under the Focus Product Scheme to marble and travertine slabs, tiles, blocks and products.</p> <p>These products were listed as High Value Added Manufactured Goods, under Table 9 of Appendix 37D, Handbook of Procedures (RE-2008). Benefits for products listed in Table 9 were granted with effect from 1 April 2008.</p> <p>The FPS grants eligible exporters with duty credit scrips worth up to the value of 2.5% FOB value of exports, which scrips may then be used to pay various dues to the government and, under some conditions, be transferred in the open market.</p> <p>The implementation date is set to 2 March 2009 because trade flows may only have responded after the announcement.</p>	02 Mar 2009	Open ended	2	61
10	Incentives for leather products, garments exported to EU and USA	Tax-based export incentive	<p>On 2 March 2009, the Government of India vide Notification No. 92 (RE-2008) / 2004-2009 read with Public Notice No. 156 / 2008, has permitted the issue of duty credit scrip under the Market Linked Focus Product Scheme (MLFPS) at the rate of 2% FOB value of exports to exporters of leather products and specified garments to the EU and USA.</p> <p>The MLFPS typically grants exporters duty credit scrips at the rate of 1.25% FOB value of exports. Duty credit scrips are utilizable for the payment of dues to the government, and under some conditions, transferable in the open market as well.</p>	02 Mar 2009	Open ended	7	Not specified
11	Incentives for leather and textile sector exports	Export subsidy	The Minister of Commerce and Industry announced that the exports of leather and textile sectors would be given incentives of INR 325 crore (USD\$ 67 m) with effect from April 1, 2009.	01 Apr 2009	30 Dec 2009	21	Not specified
12	Export benefits extended to new sectors	Tax-based export incentive	<p>On 8 September 2009, the Government of India vide Public Notice No. 08 / 2009-2014, widened the application of export benefits under the Market Linked Focus Product Scheme (MLFPS) and the Focus Product Scheme (FPS).</p> <p>Motor cars and liquid elevators (pumps) were added to the MLFPS, and linked with exports to Algeria, Egypt, Kenya, Nigeria, South Africa, Tanzania, Brazil, Mexico, Ukraine, Australia, New Zealand, Cambodia and Vietnam.</p> <p>The MLFPS incentivizes exports to specified markets in the listed products/sectors. Exporters are granted 2% FOB value of exports in the form of duty credit scrips, which scrips may then be used to pay various dues to the government and, under some conditions, be transferred in the open market.</p> <p>Machines and apparatus for soldering, brazing or welding and safety matches were introduced as new</p>	27 Aug 2009	Open ended	5	113

			focus products. The Focus Product Scheme grants eligible exporters of the listed products (including exports to any market) with duty credit scrips worth up to the value of 2% FOB value of exports.				
13	Products added to Focus Product Scheme	Tax-based export incentive	<p>On 7 September 2009, the Government of India, vide Public Notice No. 7 / 2009-2014, notified new product lines that are eligible for benefits under the Focus Product Scheme (FPS).</p> <p>The FPS grants eligible exporters with duty credit scrips worth up to the value of 2% FOB value of exports, which scrips may then be used to pay various dues to the government and, under some conditions, be transferred in the open market.</p>	07 Sep 2009	Open ended	1	Not specified
14	Interest subvention scheme extended to readymade garments	Other export incentive	<p>On 12 October 2009, the Reserve Bank of India through Circular DBOD. Dir.(Exp).BC. No. 48/04.02.001/2009-10 extended the interest subvention scheme on Rupee export credit to include exports of ready made garments under Textiles.</p> <p>In a more general export credit promotion scheme (see related measure),the RBI caps the interest rate on export credit at the Benchmark Prime Lending Rate (BPLR) minus 2.5 percentage points. Under the new scheme, designated sectors will receive a discount of up to 4.5 percentage points from the BPLR. However, the RBI demands that participants pay no less than 7 percent after the subvention.</p> <p>This specific measure is valid for export credits advanced from 1December 2008 to 31 March 2010. On 1 April 2010, the RBI remove dready made garments from the list of eligible sectors (see related measure).</p> <p>The implementation date is set at 12 October 2009 as trade flows for read made garments may only have been affected after the announcement.</p>	12 Oct 2009	12 Apr 2010	2	118
15	Incentives on woven cotton fabrics when exported to certain countries	Tax-based export incentive	<p>On 13 January 2010, the Indian Ministry of Industry &amp; Commerce published Notice. No. 33/2009-14 providing export incentives under the Market Linked Focus Product Scheme (MLFPS) to cotton woven fabrics under HS 5208 to 5212 when exported to Algeria, Egypt, Kenya, Nigeria, Tanzania, South Africa, Ukraine, Mexico, Brazil, Australia, New Zealand, Cambodia, Vietnam, China or Japan.</p> <p>The MLFPS went out of force with the announcement of the new Foreign Trade Policy in May 2015.</p>	01 Jan 2010	01 Apr 2014	1	Not specified
16	Addition to various export incentive schemes in 2010 under Foreign Trade Policy 2009-14	Tax-based export incentive	<p>Effective 1 January 2010, the Indian Ministry of Commerce and Industry added several products and markets to its export incentives schemes under the Foreign Trade Policy 2009-14.</p> <ul style="list-style-type: none"> <li>• 4 products added to the Vishesh Krishi and Gram Udyog Yojana, that incentivises agricultural exports</li> <li>• 1 Focus Market, Timor Leste, added to the Focus Market Scheme, which incentivizes exports to specific markets</li> <li>• 112 products added to the Focus Product Scheme, which incentivizes exports of specific products to all markets</li> </ul>	01 Jan 2010	01 Apr 2015	33	165

			<ul style="list-style-type: none"> <li>• 113 products added as Special Focus Products, which has additional incentives over Focus products</li> <li>• China and Japan were added in the countries list for Market Linked Focus Product Scheme, which incentivizes exports of certain to goods to specific markets. All products under MLFPS exported to China and Japan are eligible for the incentives</li> <li>• 1837 products added under MLFPS making them eligible for incentives to all specified countries.</li> <li>• Support to be provided under Market Access Initiative scheme by Export Promotion Council of Handicrafts for setting up of Warehouse in Latin America</li> </ul> <p>The measure was removed in April 2015 with the implementation of the new Indian Foreign Trade Policy of 2015 (see related measure).</p>				
17	Temporary incentives on organic and inorganic chemicals when exported to certain markets	Tax-based export incentive	<p>On 12 January 2010, the Indian Ministry of Commerce &amp; Industry published Notice No. 31/2009-14 extending the export incentives under the Market Linked Focus Product Scheme to organic and inorganic chemicals under HS chapters 28 and 29. This incentive is available for products that are exported to Algeria, Egypt, Kenya, Nigeria, Tanzania, South Africa, Ukraine, Mexico, Brazil, Australia, New Zealand, Cambodia, Vietnam, China or Japan.</p> <p>The incentive is available for exports between 1 January 2010 and 30 June 2010. The list of affected trading partners represents those countries that compete with Indian exporters in the above mentioned markets in organic and inorganic chemicals.</p>	01 Jan 2010	02 Jul 2010	6	123
18	Incentives to exporters through Market Linked Focus Programme	Tax-based export incentive	<p>On 12 January 2010, India announced an incentive scheme for exporters in sectors such as engineering, handicrafts , textiles, chemicals, electronics and some metals through the market Linked Focus Programme (MLFP). Under this programme, the exporters are allowed duty free import of inputs. The MLFP covered 15 countries in Africa, Latin America, Asia and Oceania. China and Japan were the latest markets to be included under this scheme. Exporters will get duty free scrips or certificates valued at 2-5 % of value of exports. These can be either used to import goods free of duty or sold in the market for use by other importers.</p> <p>On 31 March 2010, the programme was also extended to cover the agro-food sector as part of the stimulus package announced for exporters. Incentivesfor textiles (readymade garments) will be available till September 2010, whereasincentivesforelectronic,engineeringandagro-chemical goodswillbe givenfortheentire2010-2011periodunderthe MLFP.</p>	01 Jan 2010	02 Apr 2011	53	150
19	Export incentives extended to toilet and kitchen linen	Tax-based export incentive	<p>On 26 February 2010, the Government of India vide Public Notice No. 46/2009, extended the benefits of the Focus Product Scheme to toilet linen and kitchen linen. The benefits were granted with retrospective effect from 1 January 2010.</p> <p>The FPS grants eligible exporters with duty credit</p>	01 Jan 2010	Open ended	1	Not specified

			scrips worth up to the value of 2% FOB value of exports, which scrips may then be used to pay various dues to the government and, under some conditions, be transferred in the open market.				
20	New products added under market linked focus product scheme from 1 January 2010	Tax-based export incentive	Besides the above-mentioned products, the new MLFP now includes benefits for exporters of 12 petro-products (at the HS 8-digit level) to Algeria, Nigeria and Mexico.	01 Jan 2010	01 Apr 2014	1	Not specified
21	New products added under market linked focus product scheme from 1 January 2010	Tax-based export incentive	<p>On 31 March 2010, the Indian Ministry of Commerce &amp; Industry added several products under 78 tariff lines at the HS 6-digit level to the Market Linked Focus Product Scheme (MLPFS) from 1 January 2010.</p> <p>The MLPFS provides credit scrips worth 2% on exports of specified products to designated markets. The scrip can be used for the payment of import duties and enumerated other taxes. The scheme is part of the Foreign Trade Policy 2009-14.</p> <p>Only exports to the following countries are eligible for the described benefit: Algeria, Egypt, Kenya, Nigeria, Tanzania, South Africa, Ukraine, Mexico, Brazil, Australia, New Zealand, Cambodia, Vietnam.</p>	01 Jan 2010	01 Apr 2014	20	107
22	Lower value addition requirements under Advance Authorization Scheme	Tax-based export incentive	<p>On 16 February 2010, the Government of India, vide Public Notice No. 42 / 2009-2014, introduced Appendix 11B in Handbook of Procedures (Vol. 1) 2009-2014, referring to lowered value addition norms applicable to the Advance Authorization Scheme.</p> <p>The Advance Authorization Scheme allows duty free import of inputs which are physically incorporated in an export product, or consumed / utilized to obtain such export product. The Scheme also exempts exporters from payment of additional customs duty, education cess, anti-dumping duties and safeguard duties.</p> <p>Appendix 11B, as introduced, allows copper cathode / copper wire rods (manufactured from copper concentrate) to claim the benefits of Advance Authorization with 8% minimum value addition on export, i.e., without satisfying the standard requirement of 15% value addition.</p>	16 Feb 2010	Open ended	1	55
23	Temporary incentive for exports of readymade garments to EU and USA	Tax-based export incentive	On 31 March 2010, the Indian Ministry of Commerce & Industry provided an export incentive to readymade garment exports to the EU and USA. Exports registered between 1 April 2010 and 30 September 2010 are eligible for the incentive. The incentive is in the form of credit scrips worth 2% of the exported value. The scrip can be used for the payment of arrears to the government including import duties on future imports.	01 Apr 2010	30 Sep 2010	1	Not specified
24	Leather tariff lines added as New Focus Products	Tax-based export incentive	<p>On 30 August 2010, the Government of India vide Public Notice No. 06 (RE-2010) / 2009-2014 notified finished leather of different types as eligible for the benefits of the Focus Product Scheme.</p> <p>The FPS grants eligible exporters with duty credit scrips worth up to the value of 2% FOB value of exports, which scrips may then be used to pay various dues to the government and, under some conditions, be transferred in the open market.</p>	01 Apr 2010	Open ended	1	Not specified
25	Inclusion of Finished Leather in the Focus	Tax-based export incentive	Finished Leather falling under HS 4107, 4112 and 4113 have been included in the Focus Product Scheme of FTP 2009-14. Focus Product Scheme	01 Apr 2010	31 Mar 2015	1	Not specified

	Product Scheme of FTP 2009-14		incentivizes export of such products which have high export intensity / employment potential, so as to offset infrastructure inefficiencies and other associated costs involved in marketing of these products. Eligible firms receive credits that can be applied against import duties.				
26	Sectors added to the interest subvention scheme for rupee export credit for 2010-11	Other export incentive	<p>On 9 August 2010, the Reserve Bank of India through Circular DBOD. Dir.(Exp).BC. No.36 /04.02.001/2010-11 extended the interest subvention on Rupee export credit to include 4 additional sectors. Earlier Handicrafts, Carpets, Handlooms sectors and Small and Medium Enterprises were covered for the interest credit.</p> <p>With this measure specified sub-sectors under Leather and Leather Manufacturers, Jute Manufacturing, Engineering Goods and Textiles have also been covered. The interest credit is available for export credit advanced from 1 April 2010 to 31 March 2011.</p> <p>The subvention scheme provides a 2% interest reduction on pre-shipment and post-shipment Rupee export credit for employment oriented export sectors.</p>	01 Apr 2010	01 Apr 2011	21	149
27	Advance Authorisation benefits extended to petroleum products	Tax-based export incentive	<p>On 4 August 2010, the Government of India, vide Public Notice No. 88 / 2009-2014, allowed certain petroleum products to benefit from the Advance Authorization scheme for duty-free import of inputs, provided that the export of the resultant product add 8%.</p> <p>The Advance Authorization scheme typically imposes a value addition requirement of at least 15%.</p>	04 Aug 2010	Open ended	6	Not specified
28	Interest subvention scheme for rupee export credit extended to additional sectors	Other export incentive	<p>On 9 August 2010, the Reserve Bank of India through Circular DBOD. Dir.(Exp).BC. No.36 /04.02.001/2010-11 increased the sectors eligible for the interest rate subvention scheme for rupee export credit.</p> <p>The following sectors have been added to the scheme -</p> <ul style="list-style-type: none"> <li>• Leather and Leather Manufactures</li> <li>• Jute Manufacturing including Floor covering</li> <li>• Engineering Goods</li> <li>• Textiles</li> </ul> <p>The subvention scheme provides a 2% interest reduction on pre-shipment and post-shipment Rupee export credit for employment oriented export sectors. The sectors covered under the scheme already include Handicrafts, Handlooms, Carpets and Small and Medium Enterprises.</p> <p>The above sectors were subsequently excluded from the scheme in October 2011 (see related measure).</p>	09 Aug 2010	08 Oct 2011	21	149

29	Financial assistance to fish exporters	Export subsidy	<p>According to a report published on 7 August 2013 by the Ministry of Commerce &amp; Industry, the Government of India provided export subsidies to individual fish exporters from 2010/11 to 2012/13. These subsidies were used to finance fish exports or to develop fish production plants. The quantum of subsidy over the three years was INR 310 million (~USD 50 million) as sea freight assistance and INR 3.5 million (~USD .5 million) as development assistance.</p> <p>The GTA includes state guarantees and other financial incentives that are likely to affect the restructuring and performance of firms facing international competition, whether from imports, in export markets, and from foreign subsidiaries.</p>	01 Sep 2010	31 Aug 2012	5	139
30	Establishment and extension of Status Holder Incentive Scheme for 1 year	Tax-based export incentive	<p>On 31 October 2011, the Ministry of Commerce &amp; Industry through Notification No.84 (RE-2010)/2009-2014 extended the Status Holder Incentive Scrip under the Foreign Trade Policy 2009-14 for exports made during 2012-2013 as well. The scheme was initially valid on exports made during 2010-11 and 2011-12 only.</p> <p>Within the Indian foreign trade policy, Status Holders include business leaders, firms with high contribution to international trade and firms with high export contributions (at least USD 3 million per year). Under the Status Holder Incentive Scrip scheme, status holders in specified sectors will receive an additional incentive scrip at the rate of 1% of the FOB value of their exports during the period in which the scheme is valid. The incentive scrips can be used to get duty credit when importing capital goods for use in these sectors. The specified sectors are</p> <p style="text-align: center;">-</p> <ol style="list-style-type: none"> <li>1. Leather Sector (excluding finished leather)</li> <li>2. Textiles and Jute Sector</li> <li>3. Handicrafts</li> <li>4. Engineering Sector (excluding Iron &amp; Steel, Nonferrous Metals in primary or intermediate forms, Automobiles &amp; two wheelers, nuclear reactors &amp; parts and Ships, Boats and Floating Structures</li> <li>5. Plastics</li> <li>6. Basic Chemicals (excluding Pharma Products)</li> </ol>	01 Sep 2010	01 Mar 2013	35	176
31	Reinstatement of Duty Entitlement Passbook Scheme for cotton	Tax-based export incentive	<p>On 1 October 2010, the government of India re-introduced the Duty Entitlement Passbook Scheme (DEPB) for cotton exports.</p> <p>Firms participating in the DEPB may earn credits for exported products. This credit reflects the amount of import duty payed on intermediates used in the exported product. They can then use this credit to pay for future import duties.</p>	01 Oct 2010	Open ended	2	Not specified
32	Additional export incentives announced in	Export subsidy	<p>On 15 February 2011, the Indian Ministry of Trade and Commerce through Public Notice 33/RE-</p>	01 Jan 2011	01 Apr 2015	33	154

	2011 under the Foreign Trade Policy 2009-14		<p>2010/2009-14 added several products to its exports incentive schemes as under -</p> <ul style="list-style-type: none"> <li>• 3 products are added for incentives under the Vishesh Krishi and Gram Udyog Yojana</li> <li>• 2 products are added for incentives under the Special Focus Product Scheme</li> <li>• 49 products are added under the Focus Product Scheme</li> <li>• 13 products are added for additional Bonus benefits under the Focus Product Scheme</li> <li>• Several textile products, chemicals, tractors, and certain woven fabrics are for incentives on export to specified countries under the Market Linked Focus Product Scheme.</li> </ul> <p>The incentives are available on the specified products from 1 January 2011.</p>				
33	Reinstatement of Duty Entitlement Passbook Scheme for cotton yarn	Tax-based export incentive	<p>On 1 April 2011, the government of India re-introduced the Duty Entitlement Passbook Scheme (DEPB) for cotton yarn exports. Firms participating in the DEPB may earn credits for exported products. This credit reflects the amount of import duty payed on intermediates used in the exported product. They can then use this credit to pay for future import duties.</p>	01 Apr 2011	Open ended	1	Not specified
34	2010-11 supplement to the foreign trade policy 2009-14	Export subsidy	<p>On 13 October 2011, the Indian Ministry of Commerce and Industry announced additional incentives under the Foreign Trade Policy 2009-2014.</p> <ul style="list-style-type: none"> <li>• Additional incentive under Special Bonus Benefit Scheme at the rate of 1% of exports has been provided to 50 products under the engineering, pharmaceutical and chemical sectors. This scheme is applicable for exports between 1 October 2011 and 31 March 2012</li> <li>• 2 products have been added for bonus benefits under Focus Product Scheme</li> <li>• Cuba and Mexico have been included under the Focus Market Scheme, that incentivizes all exports to the listed markets</li> <li>• Additional incentive under Special Focus Market Scheme has been introduced at the rate of 1% of exports. Exports made to the specified countries will get incentive over and above the 3% incentive under Focus Market Scheme, in case the country is listed under both schemes. 41 countries under Latin America, Africa and the</li> </ul>	01 Apr 2011	31 Mar 2015	61	189

			<p>Commonwealth of Independent States have been included</p> <ul style="list-style-type: none"> <li>• The incentive at the rate of 2% of exports provided for export of readymade garments to EU and USA has been extended from 31 March 2011 to 31 March 2012</li> <li>• 130 items have been added to the 2% Focus Product Scheme, incentivizing exports of these products in the chemical/pharmaceutical, textiles, handicrafts, engineering and electronics sectors.</li> <li>• The 2% Market Linked Focus Product Scheme that incentivizes specified exports to specified countries is extended to 1) Agricultural tractors over 1800cc exported to Turkey, 2) Sugar machinery and high-pressure boilers exported to Brazil, Kenya, South Africa, Tanzania and Egypt and 3) Printing ink, writing ink, etc. exported to all countries that are a part of the MLFPS</li> <li>• Edible vegetables, castor oil, and certain marine products have been excluded from the Vishesh Krishi Gram Udyog Yojana, which incentivizes agricultural exports</li> <li>• Mexico has been removed as a linked market under the MLFPS</li> <li>• 3 towns have been designated as Towns of Export Excellence, one each for glassware, marine products and bamboo &amp; cane products</li> <li>• Some measures including simplification of procedures, online messaging and filing systems etc. have been introduced</li> </ul>				
35	Additional incentives under export schemes of the Foreign Trade Policy 2009-14	Export subsidy	<p>On 5 June 2012, the Indian Ministry of Commerce and Industry through Public Notice No. 3 (RE2012)/2009-14 notified the following amendments in the export incentive schemes of the Foreign Trade Policy 2009-14 as part of the Annual Supplement to the Trade Policy.</p> <ul style="list-style-type: none"> <li>• 7 markets have been added to the Focus Market Scheme and 7 to the Special Focus Market Scheme , incentivizing exports to these markets</li> <li>• 46 products have been added to the Market Linked Focus Product Scheme</li> <li>• Incentives for exports of readymade garments to EU and the USA have been extended from 31 March 2012 to 31 March 2013</li> <li>• 110 products have been added to the Focus Product Scheme, incentivizing the exports of these products</li> </ul>	05 Jun 2012	05 Apr 2015	53	179



			<ul style="list-style-type: none"> <li>9 products under the FPS are provided an additional 2% bonus incentive</li> <li>The rate of incentive for 32 products under FPS has been increased from 2% to 5%</li> <li>2 products have been added to the Vishesh Krishi and Gram Udyog Yojana and 5 products have been deleted</li> <li>3 towns have been notified as Towns of Export Excellence, two for textiles and one for handicrafts</li> </ul> <p>The measure is effective from date of issue of the Circular. The measure was removed in April 2015 with the implementation of the new Indian Foreign Trade Policy of 2015 (see related measure).</p>				
36	Temporary export subsidies on skimmed milk powder	Tax-based export incentive	<p>On 8 June 2012, the Indian Ministry of Commerce &amp; Industry provided incentives under the Vishesh Krishi Gram Udyog Yojana (VKGUY) on skimmed milk powder exports. This incentive was withdrawn on 15 July 2014.</p> <p>VKGUY provides Duty Credit Scrips of 3-5% (5% in case of skimmed milk powder) to promote exports of various agricultural produce; such scrips are freely transferable and can be used for payment of various trade related arrears to the government.</p>	08 Jun 2012	08 Jun 2014	1	Not specified
37	Interest subvention scheme for rupee export credit extended to 2013 and number of sectors increased	Export subsidy	<p>In mid-2012, the central bank of India prolonged and expanded the country's export promotion program.</p> <p>On 19 June 2012, the Reserve Bank of India through Circular DBOD. Dir.(Exp).BC. No.112/04.02.001/2011-12 extended the list of sectors eligible for an interest rate subvention scheme on export credit.</p> <p>Exporters in the following sectors are now eligible:</p> <ol style="list-style-type: none"> <li>Ready made Garments</li> <li>Processed Agriculture Products</li> <li>Sport Goods</li> <li>Toys</li> </ol> <p>The subvention scheme provides an additional 2% interest reduction on pre-shipment and post-shipment Rupee export credit for employment oriented export sectors (see related measure). The measure is effective from 1 April 2012. However, the implementation date is set at 19 June 2012 as trade flows for the stated sectors may only have been affected after the announcement.</p>	19 Jun 2012	19 Mar 2014	49	168
38	Incentives for export through land custom stations located in north eastern states and Sikkim	Export subsidy	<p>On 26 June 2012, the Indian Ministry of Commerce &amp; Industry provided an additional 1% incentive for export of products from the land customs stations in the north eastern states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. The incentive is for products listed under the Vishesh Krishi Gram Udyog Yojana</p>	26 Jun 2012	Open ended	132	Not specified

			and the Focus Product Scheme and is provided at 1% of FOB value of exports.				
39	Exemption from excise duty for exporters under Focus Product Scheme	Tax-based export incentive	<p>On 9 July 2012, the Indian Ministry of Finance allowed exemptions to exporters under the Focus Product Scheme from payments of local excise duties (taxes on domestic production).</p> <p>The Focus Product Scheme was launched in 2006 to offset high infrastructure and other market development costs for listed products that are deemed to have high export/employment potential. Exporters of these notified goods are entitled to a Duty Credit Scrip of 2% of the F.O.B value of exports. The scrip can be used to pay off various dues to the government.</p> <p>The Focus Product Scheme expired with the launch of the new Foreign Trade Policy in April 2015.</p>	09 Jul 2012	09 May 2015	94	184
40	Exemption from excise duty for exporters under Focus Market Scheme	Tax-based export incentive	<p>On 9 July 2012, the Indian Ministry of Finance allowed exemptions to exporters under the Focus Market Scheme from payments of local excise duties (taxes on domestic production).</p> <p>However, the ministry excluded the following products from the scheme:</p> <ul style="list-style-type: none"> <li>• Diamonds and other precious, semi precious stones;</li> <li>• Gold, silver, platinum and other precious metals in any form, including plain and studded jewellery;</li> <li>• Ores and Concentrates, of all types and in all forms;</li> <li>• Cereals, of all types;</li> <li>• Sugar, of all types and in all forms;</li> <li>• Crude or Petroleum oil and Crude or Petroleum based products covered under ITC HS codes 2709 to 2715, of all types and in all forms; and</li> <li>• Export of milk and milk products covered under ITC HS Codes 0401 to 0406, 19011001, 19011010, 2105 and 3501;</li> </ul> <p>The Focus Market Scheme was launched in 2006 to offset high freight costs and other externalities for exports to certain markets. Exporters to these notified markets are entitled to a Duty Credit Scrip of 3% of the F.O.B value of exports that can be used to pay off various dues to the government. Currently the scheme includes more than 100 countries.</p> <p>The Focus Market Scheme expired with the launch of the new Foreign Trade Policy in April 2015.</p>	09 Jul 2012	09 May 2015	138	202
41	Subsidy scheme to facilitate exports	Other export incentive	<p>On 26 December 2012, the Indian Ministry of Commerce and Industry introduced the following amendments to the 2% interest subvention scheme:</p> <ul style="list-style-type: none"> <li>• The scheme was set to expire on 31 March 2013 but has now been extended until 31 March 2014</li> </ul>	26 Dec 2012	27 Mar 2014	71	187

			<ul style="list-style-type: none"> <li>• It has been extended to exporters of all Small and Medium Enterprises in any sector. Initially, the scheme was restricted exporters of handicrafts, carpets, handloom, ready-made garments, processed agricultural products, sports goods and toys</li> <li>• Certain sub-sectors of the engineering sector have also been included in the scheme</li> <li>• A pilot scheme for benefits under the subvention scheme has been introduced for project exports to the SAARC region, Africa and Myanmar through the Indian export import bank</li> </ul> <p>The scheme provides interest aid of 2% to exporters of the specified products.</p>				
42	Expansion of product and market range for export subsidy under Foreign Trade Policy 2009-14	Export subsidy	<p>On 31 December 2012, the Indian Ministry of Commerce and Industry made the following amendments in its export subsidy schemes under the Foreign Trade Policy 2009-14-</p> <ul style="list-style-type: none"> <li>• 3 products are added under the Vishesh Krishi and Gram Udyog Yojana (VKGUY) and the Focus Product Scheme (FPS)</li> <li>• 3 products are added under the VKGUY</li> <li>• 102 products are added under the FPS</li> <li>• 6 products under the FPS have been given an additional benefit of 2% duty scrips on exports</li> <li>• The subsidy for 11 products under FPS has been increased from 2% to 5%</li> <li>• 62 products are added under the Market Linked Focus Product Scheme (MLFPS)</li> <li>• 5 countries are added under the Focus Market Scheme (FMS)</li> <li>• 1 country is added to the Special Focus Market Scheme</li> </ul> <p>The VKGUY scheme provides subsidy for export of forest/agricultural products, while the product and market provide subsidies for exports of specified products or to specified markets or a combination of both.</p>	01 Jan 2013	02 Apr 2015	49	178
43	Interest subvention scheme for rupee export credit extended to 134 engineering goods in 2013	Other export subsidy	<p>On 14 January 2013, the Reserve Bank of India through Circular BOD. Dir.(Exp)BC. No.70/04.02.001/2012-13 extended the list of products eligible for an interest rate subvention scheme on export credit. Specifically, it added 134 tariff lines (at the HS 4-digit level) of engineering goods as eligible for the scheme. The subvention scheme provides an additional 2% interest reduction on pre-shipment and post-</p>	01 Jan 2013	02 Apr 2014	30	Not specified

			shipment Rupee export credit for employment oriented export sectors (see related measure).				
44	Export incentives extended to Set Top Boxes/Units	Export subsidy	<p>On 5 March 2013, the Indian Ministry of Commerce &amp; Industry extended export incentives under the Focus Product Scheme to "Set Top Box/Set Top Units" (HS code 8528.71).</p> <p>The scheme provides credit scrips worth 2 percent of the export values. Such scrips can be used to pay for duty arrears including import duties and excise duties.</p>	05 Mar 2013	04 Apr 2015	1	Not specified
45	Extension of Incremental Export Incentivisation Scheme to Africa and Latin America	Tax-based export incentive	<p>On 18 April 2013, the Indian Ministry of Commerce and Industry (according to Notification No. 3(RE-2013)/2009-2014) announced the annual adjustments of the Incremental Export Incentivisation Scheme (IEIS) for the year 2013-14.</p> <p>According to the notification, exports to 53 countries in Latin America and Africa are newly eligible for the incentive. Under the prior regulation, such incentives were only available for exports to Europa, the USA and Asian nations. The incentive itself has remained unchanged and is specified as follows.</p> <p>The exporter shall receive duty credit scrip worth 2 percent of the export growth realized compared to the same period in the prior year. Exports of the following products are excluded from the scheme:</p> <ul style="list-style-type: none"> <li>• Diamond, Gold, Silver, Platinum, other precious metal in any form including plain and studded jewellery and other precious and semi-precious stones.</li> <li>• Ores and concentrates of all types and in all formations.</li> <li>• Cereals of all types.</li> <li>• Sugar of all types and all forms.</li> <li>• Crude / petroleum oil and crude / primary and base products of all types and all formulations.</li> <li>• Export of milk and milk products.</li> <li>• Export of Meat and Meat Products.</li> </ul> <p>Furthermore, exports to Singapore, the UAE and Hong Kong have been excluded from the IEIS.</p> <p>The IEIS is part of the Indian Foreign Trade Policy 2009-2014 and is amended on an annual basis. Under this scheme, an exporter is entitled a duty credit scrip for any export growth realized in the given year. A duty credit scrip is a certificate that can be used to pay taxes and duties. The scheme covers exports to the USA, Europe, Asia and 53 countries in Latin America and Africa.</p> <p>The stated incentive has been extended vide Notification 28/2009-2014 (RE- 2013) for a further year.</p>	01 Apr 2013	30 Nov 2014	164	203
46	Interest subvention scheme on rupee export credit	Other export incentive	<p>On 24 May 2013, the Reserve Bank of India through Circular DBOD. Dir.BC. No.94/04.02.001/2012-13 extended the list of products eligible for an interest</p>	01 Apr 2013	01 Apr 2014	33	163

	extended to selected textile and engineering goods		<p>rate subvention scheme on export credit. Specifically, it added 101 tariff lines of engineering goods as well as 6 tariff lines of textile goods as eligible for the scheme.</p> <p>The subvention scheme provides an additional 2% interest reduction on pre-shipment and post-shipment Rupee export credit for employment oriented export sectors (see related measure).</p> <p>The measure is effective retroactively from 1 January 2013. However, the implementation date is set at 24 May 2013 as trade flows for the stated tariff lines may only have been affected after the announcement.</p>				
47	Interest credit under interest subvention scheme for rupee export credit increased from 2% to 3%	Other export incentive	<p>On 26 August 2013, the Reserve Bank of India through Circular DBOD. Dir.BC. No.43 /04.02.001/2013-14 increased the interest credit under the interest subvention scheme for rupee export credits from 2 percentage points to 3 percentage points subject to a floor rate on the credit of 7%. The sectors covered under the scheme include Handicrafts, Handlooms, Carpets, Small and Medium Enterprises, Readymade Garments, Processed Agriculture Products, Sport Goods, Toys and Engineering Goods. The increased rate credit is applicable from 1 August 2013.</p> <p>The subvention scheme provides an interest rate reduction on pre-shipment and post-shipment Rupee export credit for employment oriented export sectors</p>	01 Aug 2013	01 Mar 2014	82	184
48	Export benefits to additional 158 high-tech items	Tax-based export incentive	<p>On 10 July 2013, the Ministry of Commerce and Industry published the Notification No.19(RE 2013)/2009-14, amending the Foreign Trade Policy 2009-2014. Within the trade policy, as stated in the Handbook of Procedures, 158 exported products (at HS 6-digit level or higher) from sectors such as engineering and electronics were added to those eligible for benefits under the Focus Product Scheme. Products covered under the Focus Product Scheme are entitled for 2 per cent duty credit scrip. The notification took effect on 15 August 2013.</p>	15 Aug 2013	Open ended	14	Not specified
49	Export incentives for Ford India Pvt. Ltd.	Export subsidy	<p>On 21 January 2014, the Ennore Port Limited Ltd (EPL) and Ford India Pvt. Limited signed an agreement to incentivize exports of Ford cars through the Ennore port for a period of ten years. The agreement provides discounts on wharf age ranging from 5% to 30% to encourage more exports through EPL. Ford India Pvt. Ltd. has an export targeted manufacturing facility near Chennai.</p> <p>EPL is a public incorporated company, owned 66.67% by the Government of India and 33.33% by the Chennai Port Trust.</p>	21 Jan 2014	19 Jan 2024	1	Not specified
50	Export of cotton yarn eligible for incentivisation scheme	Export subsidy	<p>On 23 January 2014, the Ministry of Commerce and Industry allowed exports of cotton yarn for benefits under the Incremental Exports Incentivisation Scheme (see related measure) for the financial year 2013-14. Such benefits were earlier disallowed on 25 September 2013 (see related measure)</p>	23 Jan 2014	Open ended	1	Not specified
51	Increased scope, extension for export incentive schemes	Tax-based export incentive	<p>On 27 February 2014, the Government of India, vide Public Notice No. 53 (RE-2013) / 2009-2014, notified several additional tariff lines that could</p>	27 Feb 2014	29 Mar 2015	16	135

			<p>claim benefit of India's export incentive schemes. These included:</p> <ul style="list-style-type: none"> <li>• leather, cotton yarn and fabrics, linen, and bodies for vehicles have become eligible for a benefit of 2% FOB value of export, available in the form of duty credit scrips, when such products are sold in the EU, and when the export has been made between 1 March 2014 and 31 August 2014. This notification is under the Market Linked Focus Product Scheme (MLFPS) of the Government of India, and implements Notification No. 71 (RE-2013) / 2009-2014 of the same date.</li> <li>• 10 chemicals have been included in the MLFPS, also for exports to the EU made between 1 March 2014 and 31 August 2014.</li> <li>• MLFPS benefits were granted for exports to USA and the EU, under Chapters 61 and 62 of the HS Code, with effect from 1 April 2014.</li> <li>• Yarn, glass fibre mats, twine cordage and hand-worked seashells become eligible for benefits worth between 2-5% of their FOB value, under the Focus Product Scheme (FPS), for exports made from 1 March 2014.</li> <li>• The admissible rate of benefits under the FPS for telecom transmission equipment, live telephone sets, etc. was expanded from 2% FOB value to 5%, with effect from 1 March 2014.</li> <li>• A new Town of Export Excellence was notified for export of marine products.</li> </ul>				
52	Export subsidy for raw sugar introduced (February-March 2014)	Export subsidy	<p>On 28 February 2014, the Indian Ministry of Consumer Affairs, Food and Public Distribution notified through Gazette G.S.R. 128(E) the introduction of an export subsidy for raw sugar. The incentive is available for raw sugar factories and provides an incentive of Rs. 3300 (~USD 53) per metric ton of raw sugar exports in the months of February and March 2014. The incentive will be valid till the end of the sugar season 2013-14 i.e. September 2014 and the incentive rates will be modified every two months. The notification further states that the incentive will be available for 4 million tons of sugar exports during for sugar produced and exported in the 2013-14 and 2014-15 season.</p> <p>The incentive is primarily introduced to provide liquidity to the sugar mills so that they can clear their arrears with the sugarcane farmers. The notification specifies that the sugar mills will be required to use the incentive money first for payment of such arrears and that these payments should be made within 3 months of receipt of the incentive.</p>	28 Feb 2014	30 Mar 2014	1	62

53	Export benefits to certain textile and leather products to the EU	Tax-based export incentive	<p>On 27 February 2014, the Indian Ministry of Commerce and Industry provided export benefits under the Market Linked Product Focus Scheme (MLPFS) for exports of finished leather, cotton yarn, cotton fabric, knitted fabrics, and cotton made ups to the European Union between 1 March 2014 and 31 August 2014.</p> <p>The MLPFS was set up to offset high infrastructure and other market development costs for exports of certain products that have high employment potential. Exporters of these notified goods are entitled to a Duty Credit Scrip of 2% of the F.O.B value of exports that can be used to pay off various dues to the government.</p> <p>The affected countries are (i) all countries that export the notified products to the EU countries served by India and (ii) all countries other than the EU where India exports these products but do not have this export benefit.</p>	01 Mar 2014	30 Aug 2014	6	106
54	Increased export subsidy on raw sugar (June and July 2014)	Export subsidy	<p>On 11 June 2014, the Indian Ministry of Consumer Affairs, Food and Public Distribution notified through Notification G.S.R. 394(E) an increase in the incentive on raw sugar exports for the months of June and July 2014 from INR 2777 (~USD 46) per ton to INR 3300 (~ USD 55.62) per ton.</p> <p>Please see related measures for details on the export subsidy.</p>	01 Jun 2014	31 Jul 2014	1	Not specified (62)
55	Increased export subsidy on raw sugar (August and September 2014)	Export subsidy	<p>On 8 August 2014, the Indian Ministry of Consumer Affairs, Food and Public Distribution notified through Notification G.S.R. 572(E) an increase in the incentive on raw sugar exports for the months of August and September 2014 from INR 3300 (USD 55) per ton to INR 3371(USD 55) per ton.</p> <p>Please see related measures for details on the export subsidy.</p>	01 Aug 2014	30 Sep 2014	1	Not specified (62)
56	Increased benefits for certain products under Focus Product Scheme	Tax-based export incentive	<p>On 19 September 2014, the Indian Ministry of Commerce &amp; Industry through Notification No. 70 (RE 2013)/2009-14 increased the duty credit benefit under the Focus Product Scheme from 2% to 5% on the export of the following products -</p> <ul style="list-style-type: none"> <li>• Glass envelopes for cathode ray tubes</li> <li>• safety matches</li> <li>• Dried-egg albumin</li> <li>• Microphones &amp; stands, loudspeakers, headphones/earphones, audio frequency amplifiers, electric amplifiers</li> </ul> <p>The Focus Product Scheme was launched in 2006 to offset high infrastructure and other market development costs for products that have high export/employment potential. Exporters of these notified goods are entitled to a Duty Credit Scrip of 2% of the F.O.B value of exports that can be used to</p>	19 Sep 2014	Open ended	5	47

			pay off various dues to the government. Currently the scheme covers over 1000 products.				
57	Export subsidy for raw sugar increased and extended into 2014-15 season	Export subsidy	<p>On 19 February 2015, the Indian Ministry of Consumer Affairs, Food and Public Distribution through Gazette Notification GSR 127(E) extended the incentive on raw sugar exports into the 2014-15 season starting 1st October 2014 until 30 September 2015, and increased the rate of incentive on raw sugar exports from INR 3371 (USD 55) per ton to INR 4,000 (USD 64.30) per ton. The subsidy will be applicable for total exports up to 1.4 million tons.</p> <p>Further, the notification provides that the above incentive will be available to sugar mills producers that also have ethanol production capacity only if they offer to supply ethanol to domestic oil marketing companies at a quantity equal to their ethanol production capacity or up to 25% of their annual alcohol production, whichever is less.</p>	01 Oct 2014	01 Oct 2015	1	62
58	Interest Equalisation Scheme - interest subsidy for exporters announced	Other export incentive	<p>On 18 November 2015, the Indian Cabinet Committee on Economic Affairs approved an Interest Equalisation Scheme (earlier known as the Interest Subvention Scheme) that essentially provides an interest rate subsidy on Pre &amp; Post Shipment Rupee Export Credit. The rate of this subsidy will be 3% and has been provided retrospectively from 1 April 2015 for a period of 5 years. The subsidy is available to Micro Small and Medium Enterprises in exports of 416 tariff lines that are labour intensive and employment generating. The scheme is not available to merchant exporters.</p> <p>To be eligible for subsidy under this scheme, the exported goods will have to meet the minimum criteria for processing of goods to be called as Originating from India and will be governed by the Rules of Origin provisions. According to the official press release the scheme will have a financial implication of Rs.2500 to Rs. 2700 crore (appx. USD 370 to USD 400 million) annually.</p> <p>The procedure for the implementation of the scheme was published by the Reserve Bank of India on 4 December 2015.</p> <p>*USD to INR conversion is done at INR 67.15/USD</p>	01 Apr 2015	30 Mar 2020	80	174
59	Subsidy on sugar exports approved by state of Maharashtra	Tax-based export incentive	<p>According to numerous and consistent news reports, the Indian state of Maharashtra has approved a subsidy of Rs. 1000 per tonne (appx. USD 16*) of sugar exports. As per the reports, the subsidy is provided for the marketing year 2014-15 ending 30 September 2015 and will be available for up to 800,000 tonnes of sugar. In terms of sugar production, Maharashtra is India's largest state.</p> <p>Apart from this state subsidy, the Indian government also provides an export subsidy on raw sugar (see related measure).</p> <p>* INR to USD calculated as on 10 June 2015.</p>	12 May 2015	11 Oct 2015	1	67



			Due to a lack of comprehensive trade data for 2014, the affected trading partners have been identified based on UN Comtrade data from 2013.				
60	Compulsory minimum sugar export quota for the 2015-16 season	Other export incentive	<p>On 18 September 2015, the Indian Department of Food and Public Distribution issued a Notification specifying Minimum Indicative Export Quotas (MIEQ) for the sugar season 2015-16 starting 1 October 2015.</p> <p>A total export quota of 4 million tons of all types of sugar (raw/plantation white/refined) has been notified and is divided among 570 sugar factories on the basis of their sugar production in the past 3 years. The quotas, however, are tradeable between the factories.</p> <p>The motivation for this export requirement is an excess sugar supply on the domestic market. Through its action, the government seeks to stabilize Indian sugar prizes and ensure the income of sugar mills and farmers.</p> <p>This minimum export quota was withdrawn from 8 June 2016.</p> <p>To the same end, the Indian government had provided a sugar export subsidy of INR 4000 (ca. USD 60) per metric ton. However, the subsidy lapsed on 31 September 2015 without extension (see related measure).</p>	01 Oct 2015	31 May 2016	1	67
61	Increase in fund allocation for exports incentive scheme for 2015-16	Tax-based export incentive	<p>On 7 October 2015, as per an official Press release India increased the funds allocation for exports under the Merchandise Exports Incentive Scheme (MEIS) for the financial year 2015 (until 31 March 2016) from INR 18,000 crore (USD 2771 million) to INR 21,000 crore (USD 3233 million).</p> <p>The MEIS, announced in April 2015 with the new Foreign Trade Policy, provides incentives ranging from 2-5% on exports of more than 5000 products depending on the countries the goods are exported to. Note that this measure increases the fund allocation for the year only and no further increases in product range or incentive rates have been announced here.</p>	07 Oct 2015	06 Apr 2016	142	199
62	Additional products added under merchandise exports incentive scheme	Tax-based export incentive	<p>On 29 October 2015, the Indian Ministry of Commerce &amp; Industry added additional products for incentives under the Merchandise Exports Incentive Scheme (MEIS). MEIS provides incentives ranging from 2-5% on products depending on the country they are exported to, with the countries divided into 3 groups.</p> <p>110 additional products were made eligible for incentives under the scheme. Further, incentives for existing 2225 products were increased or were provided on exports to additional countries. Incentives on 3 products (under HS 5305) were reduced. In total, 398 tariff lines were affected.</p>	29 Oct 2015	27 Apr 2020	89	183

Note: \*In GTA database there are three types of export incentives: trade finance which includes export subsidies of all types, taxed-based export incentive and other export incentives; \*\* three digit HS 2012 sectors.

