CONSTRUCTION OF INPUT-OUTPUT TABLE AND ITS MULTIPLIERS (2016-17, 2017-18, AND 2018-19)

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ADB	Asian Development Bank
ANU	Australian National University
BP	Basic Price
CE	Compensation of Employees
CIF	Cost, Insurance, and Freight
CIS	Change in Stock
CPC	Central Product Classification
CSEP	Centre for Social and Economic Progress, India
CSO	Central Statistical Organization, India
DGFT	Directorate General of Foreign Trade, India
GDP	Gross Domestic Product
GFCE	Government Final Consumption Expenditure
GFCF	Government Fixed Capital Formation
GIPE	Gokhale Institute of Politics and Economics
GOI	Government of India
GVA	Gross Value Added
ICT	Information and Communications Technology
IEG	Institute of Economic Growth, India
IFPRI	International Food Policy Research Institute
IGIDR	Indira Gandhi Institute of Development Research
IGNOU	Indira Gandhi National Open University
IMP	Imports
IMPC	Imports with CIF adjustments
IOT	Input-Output Table
ISID	Institute for Studies in Industrial Development
KLEMS	Capital, Labour, Energy, Material, and Services
MoSPI	Ministry of Statistics and Programme Implementation, India

NCAER	National Council of Applied Economic Research, India
NIC	National Industry Classification, India
NIT	Net Indirect Taxes
OCED	Organization of Economic Co-operation and Development
PFCE	Private Final Consumption Expenditure
PP	Purchaser Price
SNA	System of National Accounts
SUT	Supply and Use Table
TTM	Trade and Transport Margin
UN	United Nations

Abstract

In this paper, we conducted comparative analysis of the India's Input-Output Tables (IOT) for 2016-17, 2017-18, and 2018-19 along with its multipliers with high accuracy and precision. The IOTs are constructed with seven essential sectors: Agriculture (agriculture, livestock, forestry logging, fishing, and aquaculture), Mining and Quarrying, Manufacturing, Construction, Trade and Transportation, Service Industries, and Public Administration and Defence. These sectors were mapped and aggregated per the new Supply and Use Tables' supplementary note provided by the Central Statistical Office (CSO), Ministry of Statistics and Programme Implementation (MoSPI), Government of India, who also provides the Supply and Use Tables (SUTs) data, rather than the conventional guidelines structured in Central Product Classifications (CPC) and National Industrial Classifications (NIC). We, also, took the opportunity to clearly state the process and formulation used in the creation of four different IOTs (models) based on assumptions pertaining to technology and fixed sales structures for both product-by-product and industry-by-industry categorizing the output and transaction of the intermediate consumption and final demand in the Indian economy for the mentioned financial years. The multipliers for output, income, gross value added (GVA), import, and trade and transportation margins were computed. The results of the analysis for the three IOTs (2016-17, 2017-18, and 2018-19) modelled to output vs input vis-à-vis model used aligned with the respective year, shows no definitive pattern or trend w.r.t any given sector. Though, behaviour does not vary at large with not much difference in the slopes. We can conclude that model A (product-by-product IOT based on product technology assumption) is the best fitted IOT model for India. Though, results for other models are comparable. These results reflect the Indian economy at large for three consecutive financial years and can be applied to understand the economic structure of the Indian economy and possible macroeconomic outcomes through exogenous shocks. Given the wide applications of IOTs and multipliers in policy research analysis, this paper may be used as a readily available data source by researchers and policymakers.

1. INTRODUCTION

The application and construction of Supply and Use Tables (SUTs) is required by a country under the compliance with 1993 System of National Accounts (SNA) (Asian Development Bank, 2012). The SUTs provide a statistical framework, empowering us to generate balanced estimates of Gross Domestic Product (GDP) both at constant and current prices, to determine GDP via., three approaches namely production, expenditure, and income.

The simple description for SUTs reflect on how products relating to goods and services are brought into an economy either resultant of domestic production or imports from other countries in the supply table and how those same products via., intermediate consumption, final consumption by household and government, gross final capital formation, and exports, are used and distributed into the economy through the use table (UN, 1999, 2018). Also, SUTs provide a linkage between the industry inputs, outputs and the components of gross value added (GVA). Though, they highlight the industry dimension. SUTs can also be formulated to showcase varying aspects that different institutional sectors (for example, non-financial cooperations, government and others) provide linking important mechanisms to the different accounts of the SNA framework (production account, the goods and services account, capital account and the generation of income account).

This research work is designed to provide comparative analyses of 2016-17, 2017-18, and 2018-19 Input-Output tables (IOTs) based on four different models assumed differently vis-à-vis product-by-product and industry-by-industry. Even though, researchers, economists, and modellers have constructed input-output tables and their multipliers, but, unfortunately, none have described the method and steps required in the construction of IOT. The United Nations (1999, 2018) provides a detailed description to supply and use tables and discusses strictly about the construction of four Input-Output models based on four different assumptions but does not provide any literature or indication on how to convert the SUT at purchaser's price to SUT at basic price. Also, Pradhan et.al. (2006) gives an extensive account of input-output tables but unfortunately, misses out the conversion of SUT to basic price and the steps required to do so. Though, the book primarily focuses on the construction and applications of the social accounting matrix (SAM) for India. This allows us to fill the gaps left wide open.

Through our research work, we took the opportunity to introduce finesse in IOT modelling by taking the decimal values from 10^{-2} to 10^{-9}. We found that when considering 10^{-2} the values of the multipliers became similar, allowing us to enforce our understanding

towards the fact that no matter whatever the change in values is, the multiplication factor for two different sectors remain the same under the same circumstances. This raised questions which directed us to introducing accuracy and precision by increasing decimal value from 10^{-2} to 10^{-9}. This brought significant changes to the values and allowed us to showcase the true nature of multipliers. It is our understanding and suggestion that the decimal values could be brought down to 10^{-3} per readers' and modellers' specifications and choice. Though, we took upon ourselves to take the initiative of using the values with 10^{-9} decimal values. The change in values through multipliers reflect the change in Indian National Rupees (₹) Crores viz., in Millions.[3]

When releasing the National Accounts Statistics, the Government of India (GoI) releases the provisional values. Undergoing rounds, the final values are released between a span of 4-5 years. This explained the delay in the release of SUTs of India. Unfortunately, due to COVID-19 the Ministry of Statistics and Programme Implementation (MoSPI), GoI released 2016-17, 2017-18, and 2018-19 SUTs in the same year viz., 2022, allowing us to construct IOTs respectively and conduct comparative study of these IOTs with four different assumption-based models. Each input sector reacted differently with time towards the output. Few vagueness was observed and has been discussed allowing us to study each model individually and providing conclusion towards the best fitted model for Indian Economy.

I describe the construction of input-output tables in section 2. Section 3 analyses the making of 2016-17, 2017-18, and 2018-19 Input-Output tables, followed by Input-Output Multipliers in Section 4 which allows us to discuss the variation in Indian Economic Structure in section 5, before presenting the conclusion in section 6.

2. CONSTRUCTION OF INPUT-OUTPUT TABLE

The construction of Input-Output Table starts with first analysing the Supply and Use tables. SUTs are two tables, 1) Supply table, and 2) Use table. Both being in the form of matrices that records how supplies of various kinds of goods and services originate from domestic industries and imports, and how those supplies are distributed between various intermediates and final uses, including exports (OECD, 2001).

In the case of India, Ministry of Statistics and Programme Implementation (MoSPI), Government of India (GoI), provides SUTs along with a note published in support of the SUTs

[3] 1 million = 1,000,000 and 1 Crore = 1,00,00,000. Therefore, 1 Crore = 10 million.

for that year which briefs about the SUTs and the data from the national accounts used in the calculation of GVA by production approach, income approach and expenditure approach.

Though, India has its own Central Product Classification (CPC) compiled by the Directorate General of Foreign Trade (DGFT) (2015), GoI, as well as National Industry Classification (NIC), compiled and published by Central Statistical Organization (CSO) (2008), MoSPI, GoI, which are essential statistical standards for developing and maintaining comparable databases per economic activities. Even with the availability of CPC and NIC, the CSO provides a detailed product classifications and industry classifications with description in Annexure 1 and Annexure 2 respectively of the document in the additional note they release (National Accounts Division, 2016) for 2011-12 and 2012-13.

The mapping of industries and products to the desired sectors can be achieved with an additional help of '*Section 2. Identification of Industries and Products',* provided in the supplementary note of every year, as given below:

T1: **Identification of Industries and Products**

Sl. No	**Economic Activities**	**No. of Industries**	**No. of Products**
1	Agriculture, forestry, and fishing	4	29
2	Mining and Quarrying	6	11
3	Manufacturing	30	72
4	Electricity, gas, water supply & other utility services	4	4
5	Construction	1	1
6	Trade, repair, hotels, and restaurants	2	3
7	Transport, storage, communication & services related to broadcasting	7	7
8	Financial services	2	2
9	Real estate, ownership of dwelling & professional services	5	6
10	Public administration and defence	1	1
11	Other services	4	4
	Total	66	140

Source*:* National Accounts Division, MoSPI, GoI

Table T1 provides classification of economic activities based on the number of industries and the corresponding number of products. Along with annexure 1 and annexure 2 from the supplementary note on SUTs' 2011-12 and 2012-13, this table provides information on mapping of industries and products to the desired number of industries and products. For our purpose, I have mapped and classified into seven sectors which provides a complete perspective of the national economy, viz., 1) Agriculture, forestry, logging, fishing, and aquaculture, 2) Mining and Quarrying, 3) Manufacturing, 4) Construction, 5) Trade and Transportation, 6) Service Industries, and 7) Public Administration and Defence. I attempted in providing the most elementary sectors for classifications. This mapping provides clear distinction between three types of Trade and Transport Margins (TTM) vis-à-vis 1) positive, 2) negative, and 3) zero, as discussed in following sections. No one sector is mapped with a different kind of TTM. While, I could have mapped and classified into only three major sectors, 1) agriculture, 2) manufacturing, and 3) services. This would have mapped and merged trade and transport sector (negative TTM) to services sector (zero TTM) along with public administration and defence sector (zero TTM). This does not cleanly maps and classify the sectors. Though, they represent the primary, secondary and tertiary sectors in the economy providing crucial understanding for economic planning and development. Any more than these seven sectors will only refine and provide in-depth analysis of the economy through IOTs. Though, it still depends on the economists, researchers, and the modelers on their requirement of the number of industries and products as they desire for their purpose.

2.1 Analysing Supply and Use Tables

The initial observation of the supply table is that it is compiled at basic price (BP), whereas the use table is compiled at purchaser's price (PP). Though, the total supply is also available at purchaser's price after addition of imports, cost, insurance, and freight (CIF) adjustments, product taxes less subsidies, import duties, and trade and transport margins. The challenge that the use table poses on us is the conversion of use table at PP to use table at BP.

Before this is conducted, the author understand that both the tables (supply and use) should be mapped and converted to square matrices, n x n, where n is the row and column representing products and industries respectively.

Now that an outline has been provided as to what is to be done and how is it possible to achieve the mapping of industries and products to a square matrix, we will look into the process of converting use table at PP to use table at BP.

Appendix-I shows a sample design of the Indian Supply and Use tables. The supply table provides all of the taxations and charges levied on the supply of products. Whereas the use table provides consumption of products by industries along with the PFCE, GFCE, GFCF, change in stock (CIS), valuables and exports.

2.1.1 Trade and Transport Margins (TTM)

It is quite clear that to achieve use table at basic price, we need to remove all taxes and duties levied upon the use table at purchaser price, and this starts with the construction of trade and transport margins' matrix. The two components of TTM are, 1) Trade margin, and 2) Transport margin[4]. Appendix-II shows the process and the formulation of how to construct trade and transport margins table matrix from use table at purchaser price.

2.1.2 Net Indirect Taxes (NIT)

The second component we construct is the summation of 'Product Taxes less Subsidies' and 'Import Duty' which is known as Net Indirect Taxes (NIT), from the supply table. It refers to the difference between taxes on products and subsidies on products. These taxes and subsidies payable (received) based on the quantity or value of the goods and service produced or sold. As shown in Appendix -III, the process and formulation even though remain the same, it's important to note that, unlike, trade and transport margin column in supply table, the net indirect taxes column is the addition of two individual column matrices, 1) Product Taxes less Subsidies, and 2) Import Duty, constituting Net Indirect Taxes column matrix. The NIT table matrix is generated by applying the formulation as shown in appendix-III.

2.1.3 Imports with CIF adjustments

The third and last component we compile from supply table is the summation of 'imports' and 'CIF adjustment' columns to form 'Imports with CIF adjustment' column. We, again, form the 'Imports with CIF Adjustments' table matrix using the same process and formulation as, shown in Appendix-IV, as that of trade and transport margin and net indirect taxes.

2.2 Use Table at Basic Price

[4] Trade Margin – The difference between the actual or imputed price realized on a good purchased for resale and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of. Transport Margin – Cost paid separately by the buyer in retrieving goods at the specified time and location.

Once we have achieved, 1) trade and transport margin table, 2) net indirect taxes table, and 3) imports with CIF adjustments table, we will require to subtract these tables from the use table at purchaser price as mentioned below,

$$Use\ at\ BP_{ij} = U_{ij} - ttm_{ij} - NIT_{ij} - Impc_{ij}$$

The above equation will result in use table at basic price. This can be verified by the following observations,

• Supply at BP (x) is equal to Total Use at BP.

• Row vector of product output (g^T) in supply table will equal the row vector of product output (g^T) in use table at basic price.

3. INPUT-OUTPUT TABLES

I will follow the convention put forward by the United Nations in their publication (2018) for constructing Input-Output Tables, specifically as referenced through pages 379-383. The legends used in the construction of IO tables have been shown in appendix-VI.

I understand the complexity that Supply and Use Tables can provide due to their matrix size. In the case of India, 140 products and 66 industries, as provided by CSO, MoSPI, GoI, which were mapped to 66 products and 66 industries and later, for simplified understanding and quick analysis, were again mapped to 7 products and 7 industries. For our purpose, I will follow 7x7 sized IO tables building it using the integrated supply and use table framework as appended in Appendix – VII at table 2, table 3, and table 4 respectively.

3.1 Square versus rectangular SUTs

Even though each model of IO Table signifies unique purpose and simultaneously are based on the unique assumptions vis-à-vis technology and fixed sales structure for products and industries both via model A, B, C, and D. In most countries, the SUTs are rectangular and the same is the case with India[5]. Though, a square SUT is essential to satisfy the assumptions for the transformation into IOTs which are based on product technology assumption viz., model A

[5] As we are aware of the fact that Supply and Use Tables provide information based on industries and products. Most countries including India provide information in SUTs for products and industries. The number of industries and products define whether the SUTs will be square or rectangular. In India's case, the SUTs are rectangular, as there are 140 products (in rows) against 66 industries (in columns). The intermediate usage quadrant of the SUTs and IOT is considered for classifying whether square or rectangular.

and fixed industry sales structure assumption viz., model C. These require calculating an inverse matrix, and the rule of inverse matrix states that the matrix should be a square matrix, and its determinant must not be zero. In the case of model B and D, square matrices are not required but the application of the formula directly to the existing dimensions of the SUTs will result in square IOTs with as many rows and columns as the number of products and industries respectively.

3.2 Models used for derivation of IOTs

I understand the development of four transformation methods to construct IOTs from SUTs. The four basic input-output models are based on the following assumptions:

• **Product technology assumption (Model A; Product-by-Product IOT)**, *each product is produced in its own specific way, irrespective of the industry where it is produced* (UN, 2018). This is the most commonly used IOT methodology for constructing product-by-product IOTs. "Product" needs to be understood as referring to the level of aggregation of products in the SUTs which will only make the number of product groups equal to the number of industries. The product technology assumption comes out to be the most applicable vis-à-vis subsidiary production, as in these cases the technologies of primary and secondary products are independent. The product technology assumption requires the use of square SUTs. The aggregation of products concludes at square SUTs leading to informational loss. When such aggregation has been made, it underlines its meaning that each industry will produce several primary products, thus underlining the theoretical nature of the assumption that each aggregated product can be produced in one way only.

Mathematically, model A is expressed as the post-multiplication of the use matrix with the transformation matrix, $T = (D^T)^{-1}$, (as shown in table 7 of appendix IX)

where D is the market share matrix, and further calculations can be caried out per the table 8 in appendix X.

• **Industry technology assumption (Model B; Product-by-Product IOT)**, *each industry has its own way of production, irrespective of its product mix* (UN, 2018). This assumption-based model is used in cases of by-products or joint products, as several products are produced in a single production process.

The transformation matrix, $T = C^T$ (as shown in table 7 of appendix IX)

where C is the product-mix matrix and is used in the construction of model B based IOT.

Industry-by-Industry IOTs

These are constructed based on the transfer of inputs within the industry columns. The product classification needs to be transformed into the industry classification (industry-adjusted products). In our case, transforming 140 products into 66 industry classification on the rows.

- **Fixed industry sales structure assumption (Model C; Industry-by-Industry IOT)**, *each industry has its own specific sales structure, irrespective of its product mix* (UN, 2018). The transformation matrix, $T = C^{-1}$ (appendix IX)

  where C is the product-mix matrix and is used in the construction of model C based IOT (appendix X). This assumption seems implausible, as we understand that only in a few cases the firms supply all their products in the same proportions to their users. Though in general, it would be right to assume that the secondary products have different destinations than the primary products.

- **Fixed product sales structure assumption (Model D; Industry-by-Industry IOT)**, *each product has its own specific sales structure, irrespective of the industry where it is produced* (UN, 2018)[6]. It is a better and more realistic methodology under industry-by-industry IOT,

  The transformation matrix, T = D (appendix IX)

  where D is the market-share matrix, as discussed in the construction of model D based IOT (appendix X). The important advantage of the market share matrix as transformation matrix is that the IOTs can be derived without the aggregation to square SUTs. It allows in the reduction of loss of information.

The key difference among the assumptions lies between the 'technology assumption' and 'sales structure assumption'. The technology assumption gives rise to product-by-product IOTs, while the industry-by-industry IOTs originates from fixed sales structure assumptions (UN, 2018). Whether technology assumptions or fixed sales structure assumptions, these relate to the situation in the particular year for which the IOTs are compiled. They do not include any assumptions about constant input proportions or market shares over time. Moreover, when

[6] 'Sales Structure' indicates the proportion of the output of a product in which that product is sold for intermediate uses and final uses.

compilation of IOTs is done annually (as for India), the time series of these IO tables may be used to analyse dynamically the input structures of models dealing with the structural development of the economy in the study.

The steps and formulation of the four models have been shown in the table 5, 6, 7, 8, 9, 10, and 11 of appendix VIII, XI, and X respectively, while table 12, 13, and 14 reveals the calculation for GDP/GVA through the three approaches namely, income approach, expenditure approach and production approach. Following the process, the SUTs will yield IOTs in four distinct models per modellers choice and requirement. Annexure – I show the IOTs for the years 2016-17, 2017-18, and 2018-19.

3.3 Causes and possible treatment of negative cell entries in the product technology

I have earlier highlighted that the product technology assumption may generate negative values simply because of the mathematical systematic negative values in C^{-1} and D^{-1} transformation matrix. I understand that negative values do not justify the objective of the modellers and comprehensive explanation on how the negative values occur and can be dealt has provided in the United Nations (2018). Among many, the most interesting approaches to dealing with negatives include merging industries, changing primary producer, and applying industry technology within the product technology framework.

4. INPUT-OUTPUT MULTIPLIER

I, now, have known how to construct Input-Output Table. I will move towards the construction of Input-Output Multipliers a.k.a. multipliers. The best available literature on the construction of input-output multipliers has been penned by William Patrick McLennan (2016). The Input-Output Multipliers are a part of the impact analysis which allows policymakers to see the importance of an industry in the economy in terms of how much output, income, employment, and taxes it generates and also, what capital and imports it requires to grow. Thus, the multipliers through impact analysis focuses on both directions, the impact of other industries on the industry under study and the impact of an industry on other industries (United Nations, 1999). I, also, observe that having elements of final demand as exogenous, I can assess the sectoral and macroeconomic effects of changes in the input-output tables. These changes are measured through Leontief inverse via., the impact of changes in final demand of different industrial sectors. With the use of Leontief inverse, many researchers have developed summary measure for the input-output analysis of policy changes, which are known as input-output multipliers (Pradhan, et al., 2006).

This fundamental insight that can be obtained from I-O analysis is that the indirect effects of a policy change (operating via., a change in final demand) can be significant; in fact, they are often larger than the direct effects. Multiplier analysis, as it will show, can be used to clearly bring out the size of the direct as well as indirect effects of an exogenous change in final demand. The total effect – in terms of output, income and/or employment – of such an exogenous change is then equal to the sum of the direct and indirect effects.

Applying in Impact Analysis

Through impact analysis, one can estimate the effect of various policy instruments (regarding private consumption, government consumption and trade) on different sectors of the economy. For example, by I-O analysis, UN (1992) estimated the economic impact of the tourism industry in India. Impact analysis can be done by either a change in a vector of final demand or through output, income and employment multipliers. Change in a vector of final demand is considered in a manner similar to that of the open static input-output model. Through impact analysis, policymakers can see the importance of a sector in the economy in terms of how much employment, income and taxes it generates and how much capital and inputs it requires to grow.

Analysing the structure of an economy

The structures of different economies or those of the same economy over time have been compared extensively by using I-O tables or coefficient matrices.

An international comparison of the structures can serve as a useful guide to the development of an economy. For example, if a new or highly sophisticated industry is to be set up in an economy, its impact on the rest of the economy can be studied by examining the economic structures of countries where that particular industry already exists (generally, a developed economy). Different economies can also be compared to study whether there is a common pattern in the interrelationship among different sectors, the growth paths of similar economies can provide lessons.

The inter-temporal comparison of economic structures of the same economy can be used to study the development of technology over time. For example, the comparison may show that the economy has moved towards more capital-intensive sectors despite a growth in employment, and capital being a scarce resource – as it happened in India during the control regime. Policy action may then be taken to shift growth path towards labour-intensive sectors.

Inter-sectoral comparison of the structural components of the same economy – for instance, comparing input coefficients of large-scale and small-scale industries – can form the basis for future action regarding growth in these two components.

For international or inter-temporal comparisons of structures, strictly speaking, the I-O coefficient matrices should be available at the same sector-classification level; and, in view of the fact that the a_{ij} coefficients are value ratios, at the same set of relative sectoral prices. The sector-wise comparison of structures can be done by comparing the individual coefficients of a matrix or that of Leontief inverse, which gives the direct as well as indirect requirement coefficients. Except for a few individual coefficients, this detailed method of comparison may, however, be impractical because of the large number of input coefficients.

Analysing the price structure

I-O analysis provides in a simple but quantifiable way, the relationship between prices both of goods and primary factors in an economic system. In the I-O system, the unit cost – which is the same as the unit price – of any sector is composed of its material costs and primary inputs.

The system assumes that the increase in the price of each sector's product is equal to the increase in the prices of the primary inputs plus the increase in the prices of inputs consumed from other sectors. In other words, each sector passes on the price increase to other sectors and does not itself absorb any part of the increase in the prices of inputs. The bigger limitation of the model, however, is that the price is unaffected by changes in output levels, since in the above formulation, relative price changes do not affect the disposition of the sectoral output. Since prices are outputs are free to interact in a market economy, the use of I-O model in policies concerning price formation is rather restricted.

Applying in Economic Planning

One of the major applications of I-O techniques is in medium-term multi-sectoral planning, where the aim is to obtain detailed forecasts of supply and demand in the economy for a target year, above five to 10 years ahead. With an input-output coefficient matrix as the basis, various models have been framed in such exercises. With the advent of openness, privatisation, liberalisation and the decentralisation of economic decision-making, the concept of planning has undergone a sea change. Target-setting at the national level can no longer be done the way it used to be, only some guidelines can be given. Due to changes in various policy aspects

carried out by using the model, the utility of I-O analysis has increased, as has the utility of impact analysis.

Typically, the planners start with a simple macroeconomic model to estimate the aggregate components of final demand – viz., private consumption, public consumption, capital formation, exports and imports – for the target year. The components are then disaggregated into different sectors of the economy. These final demand vectors are then linked to input demands and factor demands, on a sector-by-sector basis, through the operation of the Leontief inverse. The output levels, and the corresponding requirement of primary inputs such as labour and capital, may show that the growth projected by the macro model is consistent with the availability of inputs. An iterative solution can then be obtained by using the so-called 'consistency model' or the open static Leontief I-O model based on the fundamental relationship,

$$X = (I-A)^{-1}. F$$

The I-O analysis, here, is concerned with merely one question, viz., what level of output should each producing sector of an economy deliver to just sufficiently satisfy the total demand for its product.

Open and Closed Models: when, besides the producing sectors, the model contains a sector (say, household) which exogenously determines a final (non-input) demand for the product of each industry and which supplies a primary input (say, labour service) not produced by the producing sectors themselves, the model is considered an open model. As long as there is at least one sector remaining in the exogenous (or autonomous) category, the I-O system is known as an open I-O system. If all the sector outputs are regarded as dependent or unknown variables, the system is said to be closed.

Static and Dynamic Models: When consideration is given only to the output level of each product needed to satisfy current demand, the need for inventory and capital accumulation are ignored or considered independently determined. Such models are known as static models. When time periods are introduced explicitly into the relationship between capital and output, the I-O system takes on a dynamic character.

In the basic open, static model, all the components of final demand – including imports and gross fixed capital formation, the two major concerns of development planning – are exogenously given and the input coefficients a_{ii} are supposed to be applicable to the target year

too. However, other models can construct where some of the components of final demand are considered endogenously.

This input-output analysis allows the policymakers to estimate the impacts of economic shocks by analysing the ripple effects throughout an economy based on the interdependencies between the industries and economic sectors without the consideration of technological changes, unused capacity, or economies of scale via., computable general equilibrium modelling. The vivid nature of the inter-sectoral analysis is presented by the input-output model; wherein the development of any industry is interrelated to all other industries' development. The researchers and United Nations have, thus, agreed to suggest that the study of ripple effect of any economic shock is through the study to project the growth path, or if projection is not possible, then analysing the probable growth paths of the final demand of every sector in the economy (United Nations, 1999). The input-output tables represent the inter-industrial linkages of a country's economic structure and how the impact to one industry generates an impact to all other industries in these production accounts.

The multipliers are calculated based on the demand-side input-output model, where the model is driven by demand for its outputs. The demand-side IO model can be used in generating various multipliers to analyse the likely effects of the economic change (McLennan, 2016).

We created direct allocation matrix, simply, by dividing each of its cell (intermediate usage) in the column by the Indian Production of that industry (total) to produce a table of technological coefficient. The resultant matrix is called the direct allocation matrix (shown in annexure-II).

For our purpose, we have computed output multipliers, income multipliers, GVA multipliers, import multipliers, and TTM multipliers. Here we replicated appendix-B of McLennan (2016) providing a brief explanation of each type of multipliers (in INR, ₹) with examples using manufacturing sector from 2016-17 IOT Model A multipliers.

For Output Multipliers,

Initial effects

The initial requirement for an extra rupee's (in crore) worth of output of a given industry.

For an extra rupee (in crore) of output of the manufacturing industry, ₹1.00 crore of output is initially required from the manufacturing industry itself.

First round effects

The amount of output required from all industries of the economy to produce the initial one rupee (in crore) of extra output from an industry.

For an extra rupee (in crore) of output of the manufacturing industry, ₹0.551729172 (= ₹0.552) of output (in crore) is required from all industries (including manufacturing) of the economy.

Industrial support effects,

The first-round output from all industries will induce extra output from all industries, and in turn, these will induce extra output, and so on. The induced output from the first-round output (but excluding the first-round output) is the industrial support output.

To produce ₹0.552 (in crore) of first-round output by all industries in the economy, ₹0.37989851 (= ₹0.38) of output (in crore) will be required from all industries eventually.

Production induced effects

The amount of output required from all industries of the economy to produce the initial one rupee of extra output and all subsequent induced output.

To produce an extra rupee of output (in crore) from the manufacturing industry, a total of ₹0.931627422 (= ₹0.932, in crore) is required from all industries.

Consumption induced effects

To produce the initial and the production induced output, wages and salary earners will earn extra income which they will spend on commodities produced by all industries in the economy. This spending will induce further production by all industries. The output resulting from this further induced production is the consumption induced effects.

An extra rupee of initial output (in crore) required from the manufacturing industry will eventually lead to ₹0.308976442 (= ₹0.309, in crore) of output induced by the spending on all commodities by wages and salary earners.

Simple multipliers

The total amount of output induced by the requirement from all industries to produce output to satisfy the demand for an extra rupee (in crore) of output from an industry.

To satisfy the demand for an extra rupee of output (in crore) from the manufacturing industry, the total of ₹1.931627422 (= ₹1.932, in crore) is ultimately required which the sum of initial effect and production induced effect.

Total multipliers

The total amount of output induced by the requirement from all industries to produce output to satisfy the demand for an extra rupee of output (in crore) from an industry, and by the spending of the extra wages and salaries earned (from producing the additional output) by households (consumers).

To satisfy the demand for an extra rupee (in crore) of manufacturing output, the production induced output of ₹1.931627422 (= ₹1.932, in crore) is required from all industries in the economy, and ₹0.308976442 (= ₹0.309, in crore) consumption induced output is required from all industries, which is the total of ₹2.240603865 (= ₹2.241, in crore) output is induced ultimately.

As the initial effect is ₹1.00 (in crore) for output multipliers, Type 1A, Type 1B, Type 2A, and Type 2B multipliers becomes self-explanatory. But when computed for income multipliers, GVA multipliers, imports multipliers, or TTM multipliers, they provide extra information as below,

Type 1A

$$\text{Type 1A} = \frac{\text{initial} + \text{first round}}{\text{initial}}$$

For a one rupee (in crore) increase in the wages and salaries earned by income earners in the industry being studied, the amount of additional wages, salaries and supplements earned by income earners in all industries in the economy, after the initial and first round of induced output.

Income earners in the manufacturing industry earned an extra one rupee for every ₹18.674, in crore, (= 1/0.053551345) of additional output. For each one rupee (in crore) increase in these worker's income, an extra ₹2.048468438 (= 2.0485, in crore) is earned by workers in all industries in the economy, after the initial and first round of induced output.

Type 1B

$$\text{Type 1B} = \frac{\text{initial} + \text{production induced}}{\text{initial}}$$

For a one rupee (in crore) increase in the wages and salaries earned by income earners in the industry being studied, the amount of additional wages, salaries and supplements earned by

income earners in all industries in the economy, after the initial, first round and industrial support induced output.

Income earners in the manufacturing industry earned an extra one rupee for every ₹18.674, in crore, (= 1/0.053551345) of additional output. For each one rupee increase in these worker's income, an extra ₹2.891043972 (= 2.891, in crore) is earned by workers in all industries in the economy, after the initial, first round and industrial support induced output.

Type 2A

$$\text{Type 2A} = \frac{\text{total multiplier}}{\text{initial}}$$

The amount of total additional wages and salaries earned by income earners in all industries in the economy due to a one rupee increase in the wages and salaries earned by income earners in the industry being studied. The amount includes the original one rupee increase in wages, salaries, and supplements.

Type 2B

$$\text{Type 2B} = \frac{\text{total multiplier} - \text{initial}}{\text{initial}}$$

Type 2B equals Type 2A less the original one rupee increases in wages and salaries.

The Input-Output Multipliers for 2016-17, 2017-18 and 2018-19 are showcased in annexure – III with output multipliers, income multipliers, GVA multipliers, and Import multipliers for a 7x7 Product/Industry sectors.

Through vast literature available on input-output modelling inclusive of tables and multipliers, it is understandable that there are two kinds of production economics, viz., supply-side economics – increase production and the overall supply of goods and services; economic growth is driven by producers and their ability to supply goods, and demand-side economics – increase consumer demand to stimulate economic activity; economic growth is driven by consumers and their spending. The modern contemporary concept of input-output modelling is inspired by both supply-side economics and demand-side economics (Bon, 1986) (Miller & Blair, 2022).

Input-output tables themselves are two-sided model that accounts for both supply and demand, but they are most commonly used for demand-side analysis because they can show the impact

of changes in final demand on the rest of the economy (Oosterhaven, 2019). While the initial data comes from "supply and use tables" which are built from a supply-side and a use (demand) side perspective, I-O analysis typically uses the tables to trace the effects of a change in demand, tracing it through the supply chain. It has been the stated as principle about demand that it determines output which remain unchallenged by the complementary principle about supply that determines input (Bon, 1986).

This leads us to understanding the limitations of input-output multipliers including assumptions of fixed, linear production relationships that don't account for bottlenecks or technological change, and neglecting crucial factors like consumer behaviour, supply constraints, and inflation (Oosterhaven, 2019). They also rely on complex data collection methods that might be expensive and inaccurate due to reliance on self-reported or monetary data that can fluctuate with prices. These limitations mean that while I-O multipliers are useful for understanding inter-industry linkages, they are not perfectly precise forecasts and work best in conjunction with other models.

Production and economic structure

- **Linearity and inflexibility:** I-O models assume a linear relationship between inputs and outputs (e.g., doubling production requires doubling inputs), which ignores real-world flexibility like economies of scale or automation.
- **Supply-side constraints:** The models are demand-driven and do not account for potential supply-side bottlenecks or capacity limitations in production. If the economy is already at full capacity, increased demand can lead to inflation rather than output increases.
- **No factor substitution:** They assume fixed input coefficients, meaning they don't allow businesses to substitute one input for another based on price or availability changes.
- **Static nature:** The models are static and do not account for dynamic factors like technological progress, capital accumulation, or economic disruptions over time.

Data and measurement

- **Labor-intensive and expensive:** Creating up to date I-O tables is a complex, costly, and time-consuming process.

- **Data inaccuracies:** Data collected through surveys can be imperfect because respondents may not have the right information, may misunderstand questions, or may not be truthful.
- **Monetary vs. physical units:** Data is often expressed in monetary terms, which can be distorted by price changes over time, while physical units are difficult to compare across different sectors.
- **Gross vs. net impacts:** I-O multipliers often report gross economic impacts and do not account for negative impacts, such as potential job losses in other sectors that might be displaced.

Economic factors

- **Consumer behaviour:** The models do not fully capture how consumers might save extra income, pay off debt, or change their spending habits, which can weaken the multiplier effect.
- **Open economy limitations:** Traditional I-O models often assume a closed economy, which is unrealistic. In an open economy, increased spending may "leak" out to imports, reducing the multiplier's impact on the domestic economy.
- **Inflation and other factors:** The impact of inflation can diminish the real value of gains from increased spending. Factors like rigid labour markets or inefficient financial systems can also impede the full realization of the multiplier effect.

5. VARIATION IN INDIAN ECONOMIC STRUCTURE

I have known and established that the Input-Output Table is the matrix representation of a balanced supply-use tables of goods and services using a product-by-product or industry-by-industry categorization of output allowing us to study the production and consumption linkages between sectors, institutions, and the rest of the world. In this aspect, I am attempting to study the deviation between the four IOT models vis-à-vis input and output for three years in study, 2016-17, 2017-18, 2018-19, through IO tables and graphs (annexure – II and IV).

Table 12, 13 and 14 represents the GDP/GVA by production, expenditure and income approach from the respective SUT/IOT for that year. The Indian production in 2016-17 is ₹2,77,64,864 crores, while it increases in 2017-18 and subsequently in 2018-19 to ₹3,03,66,427 crores and ₹3,47,66,894 crores respectively, showcasing an annual growth of 9.37% and 14.49%

respectively. The annual GDP growth rate of 11.03% and 10.59% is observed for 2017-18 and 2018-19 respectively.

The structural changes can be observed at the sectoral level and graphs have been drawn to better our understanding between the input (x-axis) and output sectors (y-axis).

Input: ***Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture***[7]

Gph 101, viz., Agriculture vs. Agriculture – the growth change remains similar among all the models at approximately -11.6% and 6.4% respectively for the year. Similar, is the annual growth pattern for other sectoral outputs, manufacturing (8.8% and 10%), construction (20% and 50%), services (40% and 35%), and public administration and defence (8.2% and 5.4%).

Trade and Transportation sector (output) varies across the range from -330% to 2470% across all models for the two years. Similarly, mining and quarrying sector (output) reports negligible growth for model A and C, while it showcases growth ranging from -13% to 72% for model B and D for two years.

Input: ***Mining and Quarrying***

Gph 201 with Agriculture as output projects similar annual growth rate of -76% and -100% across both Model B and D for both years (2017-18 and 2018-19), whilst both model A and C remain fluctuating. Gph 203 (manufacturing as output) presents of growth rate in the first year for all models ± 0.5% and for second year atleast 14%. Whereas I observe instability among the mining and quarrying, construction, and trade and transportation sectors.

Gph 206 with services sector (output) grows at -17% and -25% for all models for both years respectively. The public administration and defence clearly do not reflect any growth except for in model C where it grows with -6.44% and 18.76% for both years.

Input: ***Manufacturing***

Gph 301 – 307 presenting manufacturing (input, INR ₹), the secondary sector in an economy, follows their own trends with consistency vis-à-vis seven sectors. The overall growth rate of the sector lies at 7% and 21% across all models of the IOTs for 2017-18 and 2018-19.

Input: ***Construction***

[7] Agriculture is used ahead for agriculture, livestock, forestry, logging, fishing, and aquaculture.

Gph 401 – 407 graphical identifies construction as input against the seven sectors as output. The overall annual growth of the construction sector is 51.3% for 2017-18 and 21.8% for 2018-19 year.

Input: ***Trade and Transportation***

Gph 501 – 507 represents trade and transportation as input sector. All of them shows consistency in their own trends except Gph 503 and Gph 504. Gph 503 shows irregularities. No consistent trend among the models. There's a high negative spike in model C for 2017-18. Similarly, Gph 504 where the complete model C is high negative in output. No consistent trend among models. The overall annual growth rate for trade and transportation sector remains approximately 6% and 32% for both year (2017-18 and 2018-19) respectively across all models of IOTs.

Input: ***Services Industries***

Gph 601 – 607 represents service industries sector as input. The tertiary sector, viz., services related economic activities are represented in these graphs. How much input (INR ₹) from the services sector is used for the output (INR ₹) in self and other sectors. Gph 601 shows agriculture as output where consistent growth rate of 5.5% in the first year (2017-18) and 23.2% in the second year (2-18-19) across all models of IOT is achieved. Gph602 shows mining and quarrying as output presenting with a growth of at 56% at least in the first year and 31% in the second year across all models of IOTs. Gph 603 highlights manufacturing related economic activities, viz., secondary sector, showcasing with a growth rate ranging from 6% -14% in 2017-18 and with 52% in 2018-19. Gph 604 reflects construction as output with 36% as annual growth rate and subsequently, -10% growth rate for the second year. Gph 605 represents the trade and transportation sector which is a margin sector showcasing -16% and 14% respectively. Gph 606 present how much service sector inputs in itself as output. It brings out approximately 1% and 12% annual growth rate across all models of IOTs. Gph 607 shows a specific targeted economic activity of the service sector, viz., public administration and defence, with growth rates of -20% and 36% atleast for both years across all IOT models.

Input: ***Public Administration and Defence***

Gph 701 – 707 represents public administration and defence as input sector. The graphs were plotted against the seven sectors as output differentiated by models based on assumptions for three years (2016-17, 2017-18, and 2018-19). We observe that how public administration and

defence, a service-based sector, completely based on how services are organically provided for compensation. This sector has the least expected growth amongst all other sectors. While defence purchases are taken into manufacturing sector. This sector yields -100% growth rate in the first year and remains steady in 2018-19 with zero growth.

6. CONCLUSION

We defined the process and steps for the conversion of supply and use tables to basic price from purchaser's price and followed up with the creation of input-output tables based on the United Nations (2015) defined four assumptions-based models. These IOT models were transformed into input-output multipliers allowing policymakers for impact analysis of the national economy. The multipliers were created with high accuracy and high precision with the values ranging to 10^{-9}. When these economic factors are used against high values such as ₹80,000 crores, and ₹6,74,533 crores, we see the true difference of using the economic factors with the range 10^{-9}. This allows us to remove any extra rounding-off money that would have involved if multiplier be used in the range of 10^{-2}.

Further, we analysed all four IOT models of 2016-17, 2017-18, and 2018-19 per different input and output sectors and industries. We reported different trends, consistency, and unusual spikes and depressions observed. The percentage change would have been ineffective to state, as there isn't any standardised value to compare with. Though, 2011-12 models could have been considered as the base values for this purpose of comparison.

This work allows the researchers, modelers, economists, and policy makers to study and formulate different policies and take appropriate measures to the impact of economic shocks that might be forecasted based on the tables and data generated and computed in this research work. The application of this work goes beyond the study of impact analyses. This, further, allows to compile and compute social accounting matrix and study the computable general equilibrium of the same per the requirements of the researchers, economist, and policymakers.

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APPENDICES

APPENDIX – I

Sample design of the supply and use tables,

SUPPLY TABLE

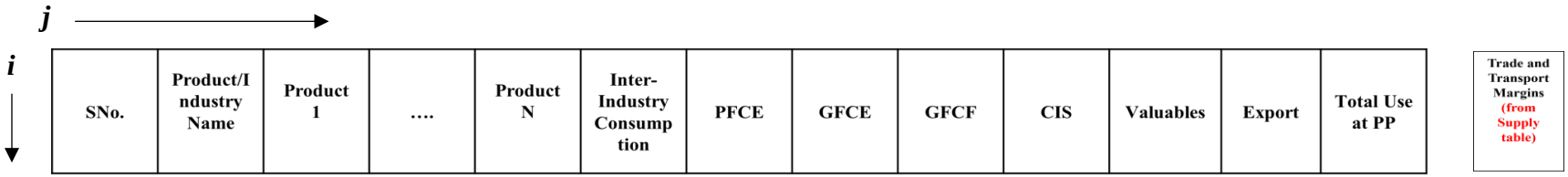
SNo.	Product/Industry Name	Product 1	….	Product N	Supply at BP (x)	Imports	CIF adj.	Total (Imports + CIF) [m]	Product taxes less Subsidies	Import Duty	Total (IMPC)	Trade and Transport Margins	Supply at PP (q)

USE TABLE

SNo.	Product/Industry Name	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Total Use at PP

APPENDIX – II

Use Table



We place the TTM column from the supply table in front of the use table at PP, and apply a formula, as below, to get the TTM matrix.

$$ttm_{ij} = \left(\frac{\$\,TTM_i}{\$\,(Total\ Use\ at\ PP_i)}\right) * U_{ij}$$

where,

***ttm*$_{ij}$** – Trade and Transport Margin table matrix

***TTM*$_i$** – Trade and Transport Margin column values from the supply table.

$ – dollar sign signifies that the value remains same for the entire row, *i*, calculation.

***U*$_{ij}$** – Individual values from the use table corresponding to the TTM_i, $(Total\ Use\ at\ PP)_i$

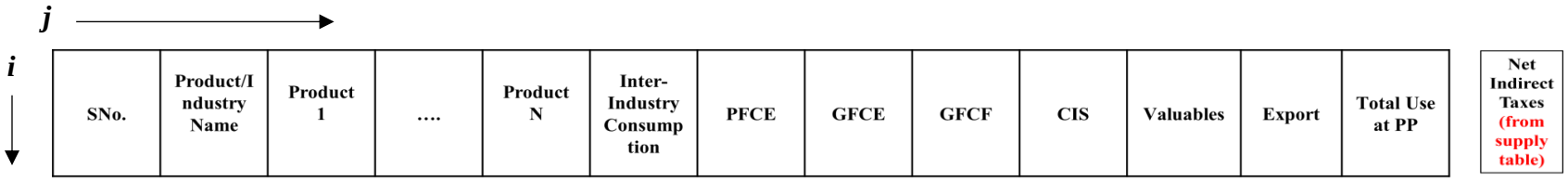
The formula is based on the concept of allocation of resources. We are calculating how much of the total use at purchaser price is assigned to trade and transport margins (TTM) and then, based on that ratio how much of each use contains TTM individually. We will get the TTM table matrix as shown below,

SNo.	Product/Industry Name	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	TTM

SNo.	Total TTM (Down)	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Total TTM

APPENDIX – III

Use Table



We place the Net Indirect Taxes (NIT) column from the supply table in front of the use table at PP which is nothing but the addition of 'Product Taxes less Subsidies' and 'Import Duty', and apply a formula, as below, to get the NIT matrix,

$$nit_{ij} = \left(\frac{\$\, NIT_i}{\$\,(Total\ Use\ at\ PP_i)} \right) * U_{ij}$$

where,

***nit*$_{ij}$** – Net Indirect Taxes table matrix

***NIT*$_i$** – Net Indirect Taxes column values from the supply table.

$ – dollar sign signifies that the value remains same for the entire row, *i*, calculation.

***U*$_{ij}$** – Individual values from the use table corresponding to the NIT_i, $(Total\ Use\ at\ PP)_i$

The formula is based on the concept of allocation of resources. We are calculating how much of the total use at purchaser price is assigned to Net Indirect Taxes (NIT) and then, based on that ratio how much of each use contains NIT individually. We will get the NIT table matrix as shown below,

SNo.	Product/ Industry Name	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	NIT

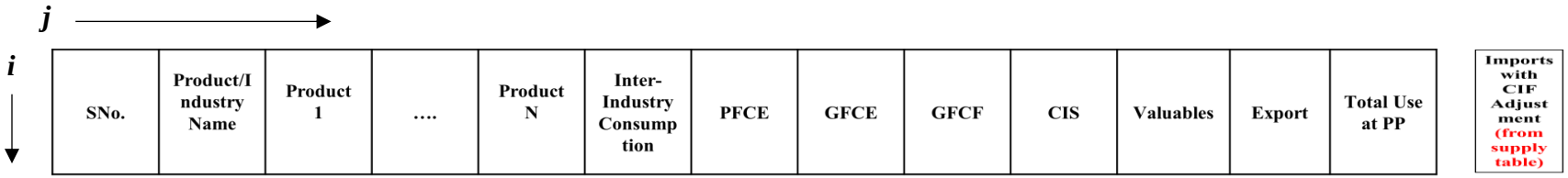
Across

Down

SNo.	Total NIT (Down)	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Total NIT

APPENDIX – IV

Use Table



We place the 'Import with CIF adjustments' column from the supply table in front of the use table at PP which is nothing but the addition of 'Imports' and 'CIF adjustments', and apply the formula, as below, to get the IMPC matrix,

$$impc_{ij} = \left(\frac{\$\, IMPC_i}{\$\, (Total\ Use\ at\ PP_i)} \right) * U_{ij}$$

where,

***impc*$_{ij}$** – Imports with CIF adjustment table matrix

***IMPC*$_i$** – Imports with CIF adjustment column values from the supply table.

$ – dollar sign signifies that the value remains same for the entire row, *i*, calculation.

***U*$_{ij}$** – Individual values from the use table corresponding to the IMPC$_i$, (Total Use at PP)$_i$

The formula is based on the concept of allocation of resources. We are calculating how much of the total use at purchaser price is assigned to Imports with CIF adjustments and then, based on that ratio how much of each use contains IMPC individually. We will get the IMPC table matrix as shown below,

SNo.	Product/ Industry Name	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Import with CIF adjustments

Across

Down

SNo.	Total IMPC (Down)	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Total IMPC

APPENDIX – V

SUPPLY TABLE

SNo.	Product/Industry Name	Product 1	….	Product N	Supply at BP (x)	Imports	CIF adj.	Total (Imports + CIF) [m]	Product taxes less Subsidies	Import Duty	Total (IMPC)	Trade and Transport Margins	Supply at PP (q)

Across

Down

(g^T)	Product/Industry Name	Product 1	….	Product N	Total Supply at BP	Imports	CIF adj.	Total (Imports + CIF)	Product taxes less Subsidies	Import Duty	Total (IMPC)	Trade and Transport Margins	Total Supply PP (down)

USE TABLE AT BASIC PRICE

SNo.	Product/Industry Name	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCG	CIS	Valuables	Export	Total Use at Basic Price (x)

Across →

↓ *Down*

SNo.	Total TTM (Down)	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Total TTM
SNo.	Total IMPC (Down)	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Total IMPC
SNo.	Total NIT (Down)	Product 1	….	Product N	Inter-Industry Consumption	PFCE	GFCE	GFCF	CIS	Valuables	Export	Total NIT
W	Product/Industry Name	Product 1	….	Product N	Total GVA							Total GVA

(g^T)	Product/Industry Name	Product 1	….	Product N	Total Inter-Industry Consumption	PFCE	GFCE	GFCG	CIS	Valuables	Export	Total Use BP (down)

APPENDIX – VI

***Table 1*: Legends for Input-Output Tables**

V	Make matrix = Transpose of Supply Matrix (Industry-by-Product)
V^T	Supply matrix (product-by-industry)
U	Use matrix for intermediates (product-by-industry)
Y	Final use matrix (product-by-category)
F	Final use matrix (industry-by-category)
S	Matrix for intermediates (product-by-product)
B	Matrix for intermediates (industry-by-industry)
E	Gross Value-Added matrix (components-by-homogenous branches)
W	Gross Value-Added matrix (components-by-industry)
$\hat{g}$	Diagonal matrix of industry output
ẍ	Diagonal matrix of product output
Y	Row vector of final use
W	Column vector of Gross Value-Added
I	Unit Matrix
x	Column vector of industry output
x^T	Row vector of product output
g	Column vector of industry output
g^T	Row vector of product output
m	Column vector of total imports

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

APPENDIX – VII

***Table 2*: SUPPLY TABLE FRAMEWORK**

	INDUSTRIES	OUTPUT	IMPORTS	SUPPLY AT BP WITH IMPORTS
PRODUCTS	V^T	x	m	q
OUTPUT	g^T			

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

***Table 3*: USE TABLE AT BASIC PRICE FRAMEWORK**

	INDUSTRIES	FINAL USE	USE AT BP
DOMESTIC PRODUCTS	U_d	Y_d	x
IMPORTED PRODUCTS	U_m	Y_m	m
GVA	W		W
OUTPUT	g^T	Y	

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

***Table 4*: INTEGRATED SUPPLY AND USE TABLE FRAMEWORK**

	DOMESTIC PRODUCTS	INDUSTRIES	FINAL USE	TOTAL
DOMESTIC PRODUCTS		U_d	Y_d	x
IMPORTED PRODUCTS		U_m	Y_m	m
INDUSTRIES	V			g
GVA		W		W
TOTAL	x^T	g^T	Y	

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

APPENDIX - VIII

***Table 5*: INPUT-OUTPUT TABLE FRAMEWORK (Product-by-Product)**

	PRODUCTS	FINAL USE	TOTAL USE
DOMESTIC PRODUCTS	S_d	Y_d	x
IMPORTED PRODUCTS	S_m	Y_m	m
GVA	E		W
OUTPUT	x^T	Y	

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

***Table 6*: INPUT-OUTPUT TABLE FRAMEWORK (Industry-by-Industry)**

	INDUSTRIES	FINAL USE	TOTAL USE
DOMESTIC INDUSTRIES	B_d	F_d	g
IMPORT FROM INDUSTRIES	B_m	F_m	m
GVA	W		W
OUTPUT	g^T	Y	

***Source*:** Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

APPENDIX – IX

***Table 7*: MARKET SHARE COEFFICIENT OF SUPPLY TABLE**

$C = V^T (\hat{g})^{-1}$	Product-mix matrix (share of each product in output of an industry)
$D = V (\ddot{x})^{-1}$	Market share matrix (contribution of each industry to the output of a product)

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

• Capital letters demote matrices and the small letters vectors.

• Transpose matrices are written as matrices with the attachment of a superscript (T)

• Vectors are written as column vectors and row vectors are written as transposed column vectors with the attachment of a superscript (T).

Note – $\hat{g}$ and $\ddot{x}$ indicates diagonal vectors.

APPENDIX – X

***Table 8*: PRODUCT-BY-PRODUCT IOT (MODEL A)**

Based on product technology assumption: Each product is produced in its own specific way, irrespective of the industry where it is produced.

NEGATIVES POSSIBLE

$T = (D^T)^{-1}$	Transformation Matrix
$S_d = U_d \cdot T$	Domestic Intermediates
$S_m = U_m \cdot T$	Import Intermediates
$E = W \cdot T$	GVA
$Y_d = Y_d$	Final Use of Domestic Products
$Y_m = Y_m$	Final Use of Imported Products

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

***Table 9*: PRODUCT-BY-PRODUCT IOT (MODEL B)**

Based on industry technology assumption: Each industry has its own specific way of production, irrespective of its product mix.

NO NEGATIVES POSSIBLE

$T = C^T$	Transformation Matrix
$S_d = U_d \cdot T$	Domestic Intermediates
$S_m = U_m \cdot T$	Import Intermediates
$E = W \cdot T$	GVA
$Y_d = Y_d$	Final Use of Domestic Products
$Y_m = Y_m$	Final Use of Imported Products

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

***Table 10*: INDUSTRY-BY-INDUSTRY IOT (MODEL C)**

Based on fixed industry sales structure assumption: Each industry has its own specific sales structure, irrespective of its product mix.

NEGATIVES POSSIBLE

$T = C^{-1}$	Transformation Matrix
$B_d = T \cdot U_d$	Domestic Intermediates
$B_m = T \cdot U_m$	Import Intermediates
$W = W$	GVA
$F_d = T \cdot Y_d$	Final Use of Domestic Products
$F_m = T \cdot Y_m$	Final Use of Imported Products

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

***Table 11*: INDUSTRY-BY-INDUSTRY IOT (MODEL D)**

Based on fixed product sales structure assumption: Each product has its own specific sales structure, irrespective of the industry where it is produced.

NO NEGATIVES POSSIBLE

T = D	Transformation Matrix
$B_d = T . U_d$	Domestic Intermediates
$B_m = T . U_m$	Import Intermediates
W = W	GVA
$F_d = T . Y_d$	Final Use of Domestic Products
$F_m = T . Y_m$	Final Use of Imported Products

Source: Handbook on Supply and Use Tables and Input-Output Tables with Extensions and Application. United Nations, 2018.

Table 12: GDP/GVA by Production, Expenditure, and Income approach from SUT 2016-17

Approach	Components	Value (₹ Crore)
Production	Output	2,77,64,864
	Intermediate Consumption	1,37,99,658
	Product Taxes Less Subsidies + Import Duties	14,26,468
	GDP = GVA + (Product Taxes less Subsidies + Import Duties) GVA = Output – Intermediate Consumption	1,53,91,675
Expenditure	PFCE	92,66,652
	GFCE	15,86,658
	GFCF	43,38,658
	CIS	2,51,935
	Valuables	1,67,326
	Export	29,49,682
	Import	31,69,236
	GDP = PFCE + GFCE + GFCF + CIS + Valuables + Export – Import	1,53,91,675
Income	Production Taxes less Subsidies	-27,939
	CFC	15,91,332
	CE	47,17,360
	OS/MI	76,84,446
	GVA = CFC + CE + OS + Production Taxes less Subsidies	1,39,65,199

Table 13: GDP/GVA by Production, Expenditure, and Income approach from SUT 2017-18

Approach	Components	Value (₹ Crore)
Production	Output	3,03,66,427
	Intermediate Consumption	1,48,60,760
	Product Taxes Less Subsidies + Import Duties	15,84,378
	GDP = GVA + (Product Taxes less Subsidies + Import Duties) GVA = Output – Intermediate Consumption	1,70,90,045
Expenditure	PFCE	1,02,04,434
	GFCE	18,40,119
	GFCF	49,35,726
	CIS	3,53,998
	Valuables	2,41,685
	Export	32,11,521
	Import	36,97,442
	GDP = PFCE + GFCE + GFCF + CIS + Valuables + Export – Import	1,70,90,045
Income	Production Taxes less Subsidies	-39,426
	CFC	17,64,814
	CE	52,75,678
	OS/MI	85,04,602
	GVA = CFC + CE + OS + Production Taxes less Subsidies	1,55,05,668

Table 14: GDP/GVA by Production, Expenditure, and Income approach from SUT 2018-19

Approach	Components	Value (₹ Crore)
Production	Output	3,47,66,894
	Intermediate Consumption	1,75,91,766
	Product Taxes Less Subsidies + Import Duties	17,24,540
	GDP = GVA + (Product Taxes less Subsidies + Import Duties) GVA = Output – Intermediate Consumption	1,88,99,668
Expenditure	PFCE	1,12,91,529
	GFCE	20,45,552
	GFCF	55,68,422
	CIS	4,02,340
	Valuables	2,26,104
	Export	37,66,294
	Import	44,00,572
	GDP = PFCE + GFCE + GFCF + CIS + Valuables + Export – Import	1,88,99,668
Income	Production Taxes less Subsidies	-43,345
	CFC	19,84,284
	CE	59,13,926
	OS/MI	93,20,264
	GVA = CFC + CE + OS + Production Taxes less Subsidies	1,71,75,129

ANNEXURE - I

INDIA: INPUT-OUTPUT TABLE 2016-17

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,64,223	-	7,06,301	60,928	-2,118	93,595	1,02,655	**12,25,584**
Mining & Quarrying	4,339	22,915	5,35,768	8,751	-566	88,485	-	**6,59,692**
Manufacturing	1,16,437	1,12,929	21,82,945	8,04,598	4,18,154	6,45,278	38,942	**43,19,284**
Construction	6,267	4,270	96,386	-	1,18,731	1,90,575	18,040	**4,34,270**
Trade and Transportation	7,343	16,472	6,30,764	-	1,60,486	3,64,119	79,081	**12,58,264**
Service Industries	1,42,553	45,628	3,19,513	4,23,092	5,81,425	11,40,877	37,497	**26,90,584**
Public admin. & Defence	-12	-	-364	-	2,234	1,969	832	**4,660**
Intermediate Inputs	**5,41,151**	**2,02,214**	**44,71,313**	**12,97,369**	**12,78,345**	**25,24,898**	**2,77,047**	**1,05,92,338**
Production Taxes Less Subsidies	-70,065	3,272	22,249	6,048	-2,109	12,685	-	**-27,919**
Consumption of Fixed Capital	1,66,694	63,391	3,15,744	68,658	2,05,023	6,57,972	1,13,842	**15,91,324**
Compensation of Employees	3,69,125	1,03,975	4,33,990	7,44,436	4,64,960	18,87,268	7,13,596	**47,17,349**
Operating Surplus	20,23,752	2,30,717	10,42,842	2,97,562	17,59,489	23,30,082	-	**76,84,444**
Gross Value Added (GVA)	24,89,507	4,01,354	18,14,825	11,16,704	24,27,363	48,88,006	8,27,438	**1,39,65,198**
Trade and Transportation Margin	99,961	23,083	4,12,732	2,31,565	-24,400	-79,897	-26,843	**6,36,201**
Net Indirect Taxes	20,771	19,163	3,72,698	1,24,526	73,462	1,27,662	7,662	**7,45,944**
Import with CIF adj.	45,160	50,379	10,32,612	2,27,234	1,40,041	3,15,441	14,306	**18,25,175**
Indian Production	**31,96,550**	**6,96,194**	**81,04,180**	**29,97,398**	**38,94,810**	**77,76,111**	**10,99,612**	**2,77,64,855**

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	18,75,517	-	8,214	19,804	-	67,429	**31,96,550**
Mining & Quarrying	1,059	-	-	24,077	-	11,368	**6,96,195**
Manufacturing	16,41,021	-	9,03,677	80,905	1,01,939	10,57,358	**81,04,184**
Construction	98,477	38,384	23,73,314	38,537	-	14,417	**29,97,398**
Trade and Transportation	22,69,294	-	-	-	-	3,67,253	**38,94,811**
Service Industries	33,03,286	4,16,153	4,37,804	-	-	9,28,288	**77,76,114**
Public admin. & Defence	-	10,91,020	-	-	-	3,932	**10,99,612**
Intermediate Inputs	**91,88,653**	**15,45,557**	**37,23,009**	**1,63,323**	**1,01,939**	**24,50,044**	**2,77,64,864**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-9,32,245	-	2,33,917	35,425	32,108	-5,407	**0.3**
Net Indirect Taxes	3,38,712	10,432	1,22,845	13,861	12,621	1,82,055	**14,26,468**
Import with CIF adj.	6,68,454	40,044	2,34,589	42,264	19,832	3,38,879	**31,69,236**
Indian Production	**92,63,574**	**15,96,033**	**43,14,360**	**2,54,873**	**1,66,500**	**29,65,571**	**3,23,60,569**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2016-17

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,60,990	10,201	6,39,321	66,561	49,414	96,443	1,02,655	**12,25,585**
Mining & Quarrying	4,800	26,444	4,87,915	14,261	38,909	87,363	-	**6,59,692**
Manufacturing	1,18,578	1,25,063	20,75,053	8,03,407	5,06,769	6,51,473	38,942	**43,19,285**
Construction	7,300	5,159	1,05,419	1,251	1,06,867	1,90,233	18,040	**4,34,270**
Trade and Transportation	9,385	22,929	5,96,386	7,078	1,81,576	3,61,831	79,081	**12,58,265**
Service Industries	1,47,228	43,465	3,95,585	4,14,211	5,18,429	11,34,171	37,497	**26,90,585**
Public admin. & Defence	-	-	-	-	1,825	2,003	832	**4,660**
Intermediate Inputs	**5,48,282**	**2,33,261**	**42,99,678**	**13,06,768**	**14,03,789**	**25,23,517**	**2,77,047**	**1,05,92,342**
Production Taxes Less Subsidies	-68,986	2,992	20,540	6,098	162	11,274	-	**-27,919**
Consumption of Fixed Capital	1,68,180	56,869	3,29,155	70,361	2,02,768	6,50,149	1,13,842	**15,91,325**
Compensation of Employees	3,74,946	92,695	5,03,376	7,26,522	4,49,482	18,56,733	7,13,596	**47,17,350**
Operating Surplus	20,08,466	2,07,801	12,49,482	3,02,843	15,49,249	23,66,605	-	**76,84,447**
Gross Value Added (GVA)	24,82,607	3,60,356	21,02,553	11,05,824	22,01,661	48,84,762	8,27,438	**1,39,65,202**
Trade and Transportation Margin	98,060	24,849	3,79,403	2,28,637	8,004	-75,909	-26,843	**6,36,201**
Net Indirect Taxes	21,227	21,256	3,54,235	1,24,734	88,538	1,28,291	7,662	**7,45,944**
Import with CIF adj.	46,375	56,472	9,68,314	2,31,435	1,92,819	3,15,453	14,306	**18,25,175**
Indian Production	**31,96,550**	**6,96,195**	**81,04,184**	**29,97,398**	**38,94,811**	**77,76,114**	**10,99,612**	**2,77,64,864**

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	18,75,517	-	8,214	19,804	-	67,429	**31,96,550**
Mining & Quarrying	1,059	-	-	24,077	-	11,368	**6,96,195**
Manufacturing	16,41,021	-	9,03,677	80,905	1,01,939	10,57,358	**81,04,184**
Construction	98,477	38,384	23,73,314	38,537	-	14,417	**29,97,398**
Trade and Transportation	22,69,294	-	-	-	-	3,67,253	**38,94,811**
Service Industries	33,03,286	4,16,153	4,37,804	-	-	9,28,288	**77,76,114**
Public admin. & Defence	-	10,91,020	-	-	-	3,932	**10,99,612**
Intermediate Inputs	**91,88,653**	**15,45,557**	**37,23,009**	**1,63,323**	**1,01,939**	**24,50,044**	**2,77,64,864**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-9,18,912	3,459	2,16,793	36,861	42,172	-16,574	**0.3**
Net Indirect Taxes	3,34,929	10,336	1,15,400	14,786	22,774	1,82,301	**14,26,469**
Import with CIF adj.	6,60,868	36,173	2,23,562	43,561	40,143	3,39,755	**31,69,237**
Indian Production	**92,65,538**	**15,95,526**	**42,78,763**	**2,58,531**	**2,07,027**	**29,55,527**	**3,23,60,571**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2016-17

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,68,625	-1	7,18,498	59,825	257	92,014	1,04,147	**12,43,365**
Mining & Quarrying	2,948	17,191	5,03,821	-3,956	-4,376	75,766	-621	**5,90,773**
Manufacturing	1,33,253	1,01,864	25,46,422	8,62,711	4,04,311	6,93,084	43,139	**47,84,784**
Construction	5,978	2,386	89,499	-9,243	99,460	1,77,350	17,578	**3,83,008**
Trade and Transportation	225	6,658	5,08,844	-63,120	1,20,262	3,20,196	80,007	**9,73,072**
Service Industries	1,45,194	36,557	3,95,979	4,09,521	5,05,941	10,87,514	31,966	**26,12,671**
Public admin. & Defence	-	-	-	-	1,918	1,910	832	**4,660**
Intermediate Inputs	**5,56,222**	**1,64,656**	**47,63,064**	**12,55,739**	**11,27,772**	**24,47,834**	**2,77,047**	**1,05,92,334**
Production Taxes Less Subsidies	-69,988	2,664	22,754	5,854	-1,495	12,291	-	**-27,919**
Consumption of Fixed Capital	1,70,622	51,617	3,64,629	66,455	1,86,371	6,37,789	1,13,842	**15,91,324**
Compensation of Employees	3,80,391	84,663	5,57,626	7,20,548	4,31,245	18,29,280	7,13,596	**47,17,349**
Operating Surplus	20,37,639	1,87,864	13,84,142	2,88,014	15,27,364	22,59,421	-	**76,84,444**
Gross Value Added (GVA)	25,18,663	3,26,808	23,29,151	10,80,871	21,43,485	47,38,782	8,27,438	**1,39,65,198**
Trade and Transportation Margin	1,00,925	12,089	4,65,588	2,19,146	-57,300	-77,405	-26,843	**6,36,201**
Net Indirect Taxes	21,844	9,343	4,34,704	1,15,873	35,992	1,20,527	7,662	**7,45,943**
Import with CIF adj.	47,720	23,906	11,88,277	2,07,212	43,992	2,99,760	14,306	**18,25,174**
Indian Production	**32,45,374**	**5,36,802**	**91,80,783**	**28,78,841**	**32,93,940**	**75,29,497**	**10,99,612**	**2,77,64,849**

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	19,02,756	-	8,328	20,092	-1	68,403	**32,42,944**
Mining & Quarrying	-25,125	-	-14,419	22,786	-1,627	-5,503	**5,66,885**
Manufacturing	18,17,878	-	10,01,069	89,625	1,12,925	11,71,312	**89,77,593**
Construction	79,001	38,384	23,62,589	37,576	-1,210	1,868	**29,01,217**
Trade and Transportation	22,52,591	-178	-73,227	-6,539	-8,239	3,00,384	**34,37,862**
Service Industries	31,61,549	4,16,330	4,38,669	-216	90	9,09,648	**75,38,741**
Public admin. & Defence	-	10,91,020	-	-	-	3,932	**10,99,612**
Intermediate Inputs	**91,88,650**	**15,45,557**	**37,23,008**	**1,63,323**	**1,01,939**	**24,50,043**	**2,77,64,855**
Production Taxes Less Subsidies	-	-	-	-	-	-	-
Consumption of Fixed Capital	-	-	-	-	-	-	-
Compensation of Employees	-	-	-	-	-	-	-
Operating Surplus	-	-	-	-	-	-	-
Gross Value Added (GVA)	-	-	-	-	-	-	-
Trade and Transportation Margin	-9,45,809	-3,832	2,66,040	31,438	8,804	7,158	**0.2800**
Net Indirect Taxes	3,44,730	6,455	1,41,614	11,899	4,894	1,70,933	**14,26,468**
Import with CIF adj.	6,80,207	28,655	2,74,346	37,969	5,096	3,17,789	**31,69,235**
Indian Production	**92,67,778**	**15,76,834**	**44,05,008**	**2,44,629**	**1,20,733**	**29,45,923**	**3,23,60,558**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2016-17

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,65,667	222	7,10,829	61,418	3,318	97,304	1,02,878	**12,41,635**
Mining & Quarrying	3,963	15,193	4,40,108	6,897	1,179	69,822	-	**5,37,162**
Manufacturing	1,23,438	97,796	25,09,895	7,81,673	3,93,032	7,07,522	52,289	**46,65,645**
Construction	7,168	3,366	1,13,033	-	1,00,461	1,78,847	17,462	**4,20,335**
Trade and Transportation	11,233	12,065	5,64,013	8,897	1,30,831	3,20,293	67,187	**11,14,518**
Service Industries	1,44,754	36,015	4,25,189	3,96,854	4,97,035	10,72,138	36,400	**26,08,383**
Public admin. & Defence	-	-	-	-	1,918	1,910	832	**4,660**
Intermediate Inputs	**5,56,222**	**1,64,656**	**47,63,066**	**12,55,739**	**11,27,772**	**24,47,835**	**2,77,047**	**1,05,92,338**
Production Taxes Less Subsidies	-69,988	2,664	22,754	5,854	-1,495	12,291	-	**-27,919**
Consumption of Fixed Capital	1,70,622	51,617	3,64,629	66,455	1,86,371	6,37,789	1,13,842	**15,91,324**
Compensation of Employees	3,80,391	84,663	5,57,626	7,20,548	4,31,245	18,29,280	7,13,596	**47,17,349**
Operating Surplus	20,37,639	1,87,864	13,84,142	2,88,014	15,27,364	22,59,421	-	**76,84,444**
Gross Value Added (GVA)	25,18,663	3,26,808	23,29,151	10,80,871	21,43,485	47,38,782	8,27,438	**1,39,65,198**
Trade and Transportation Margin	99,018	15,304	4,27,174	2,16,942	-20,328	-75,068	-26,843	**6,36,201**
Net Indirect Taxes	22,272	12,706	4,09,880	1,16,662	56,765	1,19,996	7,662	**7,45,944**
Import with CIF adj.	48,869	33,403	11,08,226	2,12,885	1,11,044	2,96,441	14,306	**18,25,175**
Indian Production	**32,45,044**	**5,52,876**	**90,37,498**	**28,83,100**	**34,18,739**	**75,27,985**	**10,99,612**	**2,77,64,855**

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	18,95,218	2,485	10,829	19,804	-	72,972	**32,42,944**
Mining & Quarrying	862	-	-	19,605	-	9,257	**5,66,885**
Manufacturing	20,17,934	2,572	9,81,243	86,614	1,01,939	11,21,651	**89,77,597**
Construction	95,317	37,153	22,97,158	37,300	-	13,954	**29,01,217**
Trade and Transportation	19,76,387	9,042	9,512	-	-	3,28,404	**34,37,863**
Service Industries	32,02,936	4,03,285	4,24,267	-	-	8,99,874	**75,38,745**
Public admin. & Defence	-	10,91,020	-	-	-	3,932	**10,99,612**
Intermediate Inputs	**91,88,653**	**15,45,557**	**37,23,009**	**1,63,323**	**1,01,939**	**24,50,044**	**2,77,64,864**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-9,32,281	-	2,45,518	33,188	22,406	-5,032	**0.2800**
Net Indirect Taxes	3,40,843	6,917	1,32,744	12,986	16,044	1,70,992	**14,26,468**
Import with CIF adj.	6,72,420	26,550	2,59,931	39,595	27,285	3,18,281	**31,69,236**
Indian Production	**92,69,634**	**15,79,024**	**43,61,202**	**2,49,092**	**1,67,674**	**29,34,285**	**3,23,60,569**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2017-18

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,32,821	-	7,68,598	73,359	4,884	1,31,184	1,11,195	**13,22,042**
Mining & Quarrying	685	189	5,34,467	9,230	-527	72,664	-	**6,16,708**
Manufacturing	1,35,728	52,527	24,64,419	8,31,441	5,75,592	5,17,024	46,402	**46,23,132**
Construction	1,351	58,542	2,91,715	3,565	78,765	2,10,009	13,394	**6,57,340**
Trade and Transportation	15,102	1,10,408	89,037	-	4,17,338	6,08,510	85,633	**13,26,028**
Service Industries	1,50,592	75,749	3,65,128	5,77,389	4,83,589	11,51,537	29,388	**28,33,373**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**5,36,278**	**2,97,415**	**45,13,364**	**14,94,984**	**15,59,641**	**26,90,928**	**2,86,012**	**1,13,78,622**
Production Taxes Less Subsidies	-89,702	3,037	9,288	6,681	-13,088	44,358	-	**-39,426**
Consumption of Fixed Capital	1,79,438	66,608	3,41,699	77,995	2,42,806	7,33,867	1,22,401	**17,64,814**
Compensation of Employees	4,18,867	1,19,980	4,76,771	8,16,572	5,93,200	20,27,607	8,22,682	**52,75,678**
Operating Surplus	22,88,792	2,16,753	12,31,966	3,27,507	19,34,653	25,04,931	-	**85,04,602**
Gross Value Added (GVA)	27,97,395	4,06,378	20,59,723	12,28,755	27,57,571	53,10,763	9,45,083	**1,55,05,668**
Trade and Transportation Margin	88,655	-80,181	10,34,301	2,60,416	-1,94,674	-3,14,733	-30,681	**7,63,102**
Net Indirect Taxes	21,422	16,335	2,62,527	96,446	93,721	1,45,141	10,807	**6,46,399**
Import with CIF adj.	47,043	20,648	12,53,693	2,52,747	1,79,096	3,03,548	15,861	**20,72,637**
Indian Production	**34,90,793**	**6,60,596**	**91,23,608**	**33,33,347**	**43,95,355**	**81,35,647**	**12,27,082**	**3,03,66,428**

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	20,51,127	-	4,139	40,221	-	73,264	**34,90,794**
Mining & Quarrying	951	-	-	32,520	-	10,416	**6,60,595**
Manufacturing	19,50,146	-	11,36,964	1,19,083	1,50,733	11,43,545	**91,23,603**
Construction	1,03,142	29,668	24,99,830	25,375	-	17,992	**33,33,347**
Trade and Transportation	26,77,513	-	-	-	-	3,91,814	**43,95,355**
Service Industries	33,74,292	5,16,248	3,83,466	-	-	10,28,268	**81,35,647**
Public admin. & Defence	-	12,22,819	-	-	-	4,263	**12,27,081**
Intermediate Inputs	**1,01,57,171**	**17,68,736**	**40,24,399**	**2,17,200**	**1,50,733**	**26,69,563**	**3,03,66,423**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-12,00,494	-	3,25,458	57,038	43,000	11,897	**0.16449**
Net Indirect Taxes	4,77,198	29,049	2,44,161	12,506	11,687	1,63,377	**15,84,377**
Import with CIF adj.	7,70,558	42,335	3,41,708	67,253	36,266	3,66,685	**36,97,442**
Indian Production	**1,02,04,434**	**18,40,119**	**49,35,726**	**3,53,998**	**2,41,685**	**32,11,521**	**3,56,48,243**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2017-18

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,30,344	8,849	7,06,787	77,620	54,486	1,32,761	1,11,195	**13,22,042**
Mining & Quarrying	1,113	6,292	4,90,078	13,144	34,210	71,870	-	**6,16,708**
Manufacturing	1,36,937	72,988	23,59,706	8,32,137	6,44,379	5,30,584	46,402	**46,23,132**
Construction	2,596	52,017	2,87,362	5,904	88,384	2,07,683	13,394	**6,57,340**
Trade and Transportation	18,554	93,252	1,54,540	1,306	3,65,924	6,06,820	85,633	**13,26,028**
Service Industries	1,55,412	67,961	4,24,175	5,67,652	4,49,054	11,39,731	29,388	**28,33,373**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**5,44,955**	**3,01,359**	**44,22,646**	**14,97,763**	**16,36,438**	**26,89,449**	**2,86,012**	**1,13,78,622**
Production Taxes Less Subsidies	-88,176	2,607	7,556	6,591	-9,440	41,437	-	**-39,426**
Consumption of Fixed Capital	1,81,339	59,580	3,58,542	79,220	2,38,279	7,25,453	1,22,401	**17,64,814**
Compensation of Employees	4,25,197	1,06,181	5,54,936	8,02,425	5,64,757	19,99,500	8,22,682	**52,75,678**
Operating Surplus	22,71,756	1,97,132	14,26,407	3,31,981	17,38,582	25,38,744	-	**85,04,602**
Gross Value Added (GVA)	27,90,117	3,65,499	23,47,441	12,20,217	25,32,177	53,05,134	9,45,083	**1,55,05,668**
Trade and Transportation Margin	85,516	-54,866	9,14,581	2,62,108	-1,04,274	-3,09,281	-30,681	**7,63,102**
Net Indirect Taxes	21,996	16,737	2,57,656	96,392	97,474	1,45,338	10,807	**6,46,399**
Import with CIF adj.	48,210	31,868	11,81,283	2,56,867	2,33,540	3,05,007	15,861	**20,72,637**
Indian Production	**34,90,793**	**6,60,596**	**91,23,607**	**33,33,347**	**43,95,355**	**81,35,647**	**12,27,082**	**3,03,66,428**

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	20,51,127	-	4,139	40,221	-	73,264	**34,90,794**
Mining & Quarrying	951	-	-	32,520	-	10,416	**6,60,595**
Manufacturing	19,50,146	-	11,36,964	1,19,083	1,50,733	11,43,545	**91,23,603**
Construction	1,03,142	29,668	24,99,830	25,375	-	17,992	**33,33,347**
Trade and Transportation	26,77,513	-	-	-	-	3,91,814	**43,95,355**
Service Industries	33,74,292	5,16,248	3,83,466	-	-	10,28,268	**81,35,647**
Public admin. & Defence	-	12,22,819	-	-	-	4,263	**12,27,081**
Intermediate Inputs	**1,01,57,171**	**17,68,736**	**40,24,399**	**2,17,200**	**1,50,733**	**26,69,563**	**3,03,66,423**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-12,00,494	-	3,25,458	57,038	43,000	11,897	**0.1644859**
Net Indirect Taxes	4,77,198	29,049	2,44,161	12,506	11,687	1,63,377	**15,84,377**
Import with CIF adj.	7,70,558	42,335	3,41,708	67,253	36,266	3,66,685	**36,97,442**
Indian Production	**1,02,04,434**	**18,40,119**	**49,35,726**	**3,53,998**	**2,41,685**	**32,11,521**	**3,56,48,243**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2017-18

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,36,947	-	7,82,292	72,687	6,630	1,29,524	1,12,778	**13,40,857**
Mining & Quarrying	-610	-387	5,02,580	-1,152	-5,433	64,411	-581	**5,58,827**
Manufacturing	1,51,560	47,409	28,10,236	8,86,403	5,47,946	5,50,936	50,638	**50,45,128**
Construction	1,463	48,053	2,91,903	-3,361	66,980	2,00,350	13,003	**6,18,391**
Trade and Transportation	9,501	91,701	-7,205	-58,215	3,46,450	5,79,003	85,644	**10,46,879**
Service Industries	1,53,851	59,214	4,46,536	5,64,141	4,21,143	10,99,125	24,531	**27,68,539**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**5,52,711**	**2,45,989**	**48,26,343**	**14,60,503**	**13,83,717**	**26,23,348**	**2,86,012**	**1,13,78,622**
Production Taxes Less Subsidies	-89,431	2,512	8,244	6,527	-10,410	43,132	-	**-39,426**
Consumption of Fixed Capital	1,83,920	55,091	3,91,249	76,196	2,21,073	7,14,884	1,22,401	**17,64,814**
Compensation of Employees	4,31,249	99,234	6,05,522	7,97,738	5,44,318	19,74,935	8,22,682	**52,75,678**
Operating Surplus	23,04,089	1,79,274	15,56,542	3,19,953	17,01,471	24,43,273	-	**85,04,602**
Gross Value Added (GVA)	28,29,827	3,36,111	25,61,557	12,00,414	24,56,452	51,76,224	9,45,083	**1,55,05,668**
Trade and Transportation Margin	87,967	-78,813	10,89,241	2,46,007	-2,48,939	-3,01,679	-30,681	**7,63,102**
Net Indirect Taxes	22,626	9,991	3,06,842	91,852	66,009	1,38,271	10,807	**6,46,399**
Import with CIF adj.	49,592	938	14,06,817	2,36,061	73,554	2,89,813	15,861	**20,72,637**
Indian Production	**35,42,724**	**5,14,215**	**1,01,90,800**	**32,34,837**	**37,30,793**	**79,25,977**	**12,27,082**	**3,03,66,428**

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	20,80,320	-	4,198	40,794	-	74,307	**35,40,476**
Mining & Quarrying	-23,464	0	-14,235	31,029	-1,887	-3,900	**5,46,371**
Manufacturing	21,28,067	-21	12,40,757	1,29,956	1,64,495	12,47,914	**99,56,296**
Construction	86,698	29,665	24,90,253	24,372	-1,269	8,355	**32,56,465**
Trade and Transportation	26,38,596	-842	-80,826	-8,399	-10,633	3,24,707	**39,09,483**
Service Industries	32,46,954	5,17,115	3,84,251	-552	27	10,13,917	**79,30,251**
Public admin. & Defence	-	12,22,819	-	-	-	4,263	**12,27,081**
Intermediate Inputs	**1,01,57,171**	**17,68,736**	**40,24,399**	**2,17,200**	**1,50,733**	**26,69,563**	**3,03,66,423**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-12,17,580	-4,075	3,55,172	54,297	21,667	27,417	**0.164486**
Net Indirect Taxes	4,83,990	25,992	2,66,448	10,449	-5,337	1,56,437	**15,84,377**
Import with CIF adj.	7,81,525	38,057	3,72,892	64,374	12,992	3,54,965	**36,97,442**
Indian Production	**1,02,05,106**	**18,28,709**	**50,18,912**	**3,46,320**	**1,80,054**	**32,08,382**	**3,56,48,243**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2017-18

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,34,585	383	7,74,140	75,112	9,192	1,34,558	1,11,375	**13,39,344**
Mining & Quarrying	933	129	4,42,344	7,458	706	58,501	-	**5,10,072**
Manufacturing	1,42,224	57,630	26,99,798	8,15,432	5,56,994	6,08,541	58,860	**49,39,478**
Construction	2,573	47,302	3,06,358	3,403	69,569	1,99,890	13,085	**6,42,179**
Trade and Transportation	18,942	79,313	1,52,691	10,128	3,23,119	5,28,207	73,849	**11,86,250**
Service Industries	1,53,454	61,232	4,51,011	5,48,970	4,24,138	10,93,650	28,844	**27,61,299**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**5,52,711**	**2,45,989**	**48,26,343**	**14,60,503**	**13,83,717**	**26,23,348**	**2,86,012**	**1,13,78,622**
Production Taxes Less Subsidies	-89,431	2,512	8,244	6,527	-10,410	43,132	-	**-39,426**
Consumption of Fixed Capital	1,83,920	55,091	3,91,249	76,196	2,21,073	7,14,884	1,22,401	**17,64,814**
Compensation of Employees	4,31,249	99,234	6,05,522	7,97,738	5,44,318	19,74,935	8,22,682	**52,75,678**
Operating Surplus	23,04,089	1,79,274	15,56,542	3,19,953	17,01,471	24,43,273	-	**85,04,602**
Gross Value Added (GVA)	28,29,827	3,36,111	25,61,557	12,00,414	24,56,452	51,76,224	9,45,083	**1,55,05,668**
Trade and Transportation Margin	84,859	-54,850	9,67,325	2,48,542	-1,53,066	-2,99,026	-30,681	**7,63,102**
Net Indirect Taxes	23,173	11,175	2,97,742	92,048	73,481	1,37,973	10,807	**6,46,399**
Import with CIF adj.	50,704	14,125	13,20,926	2,41,223	1,41,279	2,88,519	15,861	**20,72,637**
Indian Production	**35,41,274**	**5,52,549**	**99,73,893**	**32,42,729**	**39,01,862**	**79,27,038**	**12,27,082**	**3,03,66,428**

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	20,71,733	3,153	6,481	40,221	-	79,544	**35,40,476**
Mining & Quarrying	786	-	-	26,897	-	8,615	**5,46,371**
Manufacturing	23,39,313	2,108	11,95,598	1,25,287	1,50,728	12,03,784	**99,56,296**
Construction	1,00,763	28,984	24,42,173	24,790	-	17,577	**32,56,465**
Trade and Transportation	23,53,134	9,270	6,885	-	-	3,53,943	**39,09,482**
Service Industries	32,91,441	5,02,403	3,73,263	4	5	10,01,837	**79,30,251**
Public admin. & Defence	-	12,22,819	-	-	-	4,263	**12,27,081**
Intermediate Inputs	**1,01,57,171**	**17,68,736**	**40,24,399**	**2,17,200**	**1,50,733**	**26,69,563**	**3,03,66,423**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-12,00,422	-	3,32,855	55,723	37,031	11,711	**0.1644859**
Net Indirect Taxes	4,78,196	24,026	2,51,562	12,218	12,940	1,59,036	**15,84,377**
Import with CIF adj.	7,72,798	35,015	3,56,690	65,702	37,636	3,56,965	**36,97,442**
Indian Production	**1,02,07,743**	**18,27,776**	**49,65,506**	**3,50,842**	**2,38,340**	**31,97,275**	**3,56,48,243**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2018-19

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,47,757	-	8,46,385	1,12,224	33,425	1,77,718	1,17,268	**15,34,778**
Mining & Quarrying	-303	147	6,37,328	14,900	-72	54,175	-	**7,06,174**
Manufacturing	1,44,506	52,019	31,37,540	10,73,736	5,71,391	6,06,470	49,488	**56,35,150**
Construction	895	59,726	2,78,777	-	1,29,271	3,17,508	15,110	**8,01,289**
Trade and Transportation	13,823	86,044	1,63,791	-	5,89,824	7,74,448	91,955	**17,19,886**
Service Industries	1,86,954	1,03,710	5,98,936	5,13,952	5,52,614	12,92,944	40,020	**32,89,130**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**5,93,633**	**3,01,648**	**56,62,757**	**17,14,813**	**18,76,452**	**32,23,263**	**3,13,842**	**1,36,86,406**
Production Taxes Less Subsidies	-1,01,859	4,058	9,053	8,256	-15,914	53,061	-	**-43,345**
Consumption of Fixed Capital	1,95,165	74,316	3,72,843	92,942	2,78,106	8,38,479	1,32,433	**19,84,284**
Compensation of Employees	4,39,938	1,27,166	5,50,894	9,03,673	6,38,603	23,40,596	9,13,055	**59,13,926**
Operating Surplus	24,63,269	2,68,921	13,69,288	3,92,931	20,88,034	27,37,821	-	**93,20,264**
Gross Value Added (GVA)	29,96,513	4,74,462	23,02,079	13,97,801	29,88,829	59,69,957	10,45,488	**1,71,75,129**
Trade and Transportation Margin	88,755	-60,327	11,23,079	3,20,617	-3,47,994	-4,43,810	-36,767	**6,43,554**
Net Indirect Taxes	23,306	16,102	2,97,754	1,01,031	1,01,762	1,66,705	11,735	**7,18,396**
Import with CIF adj.	48,880	21,862	16,47,062	3,03,421	1,81,360	3,23,655	17,171	**25,43,410**
Indian Production	**37,51,085**	**7,53,746**	**1,10,32,731**	**38,37,684**	**48,00,410**	**92,39,770**	**13,51,469**	**3,47,66,895**

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	21,00,533	-	4,992	30,155	-	80,627	**37,51,085**
Mining & Quarrying	1,138	-	-	35,302	-	11,132	**7,53,746**
Manufacturing	23,82,952	-	13,15,430	1,60,139	1,44,706	13,94,356	**1,10,32,733**
Construction	1,59,260	66,004	27,68,641	15,908	-	26,582	**38,37,683**
Trade and Transportation	26,10,044	-	-	-	-	4,70,480	**48,00,410**
Service Industries	37,37,041	5,50,776	4,81,849	-	-	11,80,975	**92,39,770**
Public admin. & Defence	-	13,47,234	-	-	-	4,235	**13,51,469**
Intermediate Inputs	**1,09,90,967**	**19,64,013**	**45,70,912**	**2,41,504**	**1,44,706**	**31,68,387**	**3,47,66,896**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-10,88,951	-	3,46,543	64,296	44,041	-9,482	**-**
Net Indirect Taxes	5,11,810	42,323	2,45,442	13,636	7,143	1,85,790	**17,24,540**
Import with CIF adj.	8,74,269	60,115	3,68,264	88,338	28,827	4,37,349	**44,00,572**
Indian Production	**1,12,88,094**	**20,66,452**	**55,31,160**	**4,07,774**	**2,24,717**	**37,82,044**	**4,08,92,008**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2018-19

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING PRODUCTS (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING PRODUCTS (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	2,45,369	11,046	7,92,250	1,17,513	71,190	1,80,142	1,17,268	**15,34,778**
Mining & Quarrying	-	8,365	5,91,504	21,092	30,466	54,747	-	**7,06,174**
Manufacturing	1,45,889	83,430	30,13,952	10,72,708	6,47,773	6,21,910	49,488	**56,35,150**
Construction	2,636	51,509	2,84,732	3,245	1,29,858	3,14,198	15,110	**8,01,289**
Trade and Transportation	17,911	71,746	2,33,939	2,720	5,27,403	7,74,212	91,955	**17,19,886**
Service Industries	1,91,550	91,664	6,54,160	5,04,669	5,25,841	12,81,226	40,020	**32,89,130**
Public admin. & Defence	-	-	-	-	-	-	-	-
Intermediate Inputs	**6,03,355**	**3,17,761**	**55,70,536**	**17,21,947**	**19,32,532**	**32,26,435**	**3,13,842**	**1,36,86,406**
Production Taxes Less Subsidies	-1,00,181	3,340	7,917	8,081	-12,220	49,718	-	**-43,345**
Consumption of Fixed Capital	1,97,140	64,661	3,95,350	94,451	2,71,236	8,29,012	1,32,433	**19,84,284**
Compensation of Employees	4,46,877	1,10,115	6,38,970	8,81,591	6,16,674	23,06,644	9,13,055	**59,13,926**
Operating Surplus	24,44,886	2,35,860	15,65,065	3,98,030	19,03,841	27,72,582	-	**93,20,264**
Gross Value Added (GVA)	29,88,722	4,13,976	26,07,303	13,82,154	27,79,531	59,57,955	10,45,488	**1,71,75,129**
Trade and Transportation Margin	85,097	-34,063	10,00,581	3,21,380	-2,54,002	-4,38,672	-36,767	**6,43,554**
Net Indirect Taxes	23,909	16,909	2,93,597	1,01,059	1,04,236	1,66,950	11,735	**7,18,396**
Import with CIF adj.	50,002	39,163	15,60,715	3,11,145	2,38,113	3,27,102	17,171	**25,43,410**
Indian Production	**37,51,085**	**7,53,746**	**1,10,32,731**	**38,37,684**	**48,00,410**	**92,39,770**	**13,51,469**	**3,47,66,895**

USING PRODUCTS (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING PRODUCTS (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	21,00,533	-	4,992	30,155	-	80,627	**37,51,085**
Mining & Quarrying	1,138	-	-	35,302	-	11,132	**7,53,746**
Manufacturing	23,82,952	-	13,15,430	1,60,139	1,44,706	13,94,356	**1,10,32,733**
Construction	1,59,260	66,004	27,68,641	15,908	-	26,582	**38,37,683**
Trade and Transportation	26,10,044	-	-	-	-	4,70,480	**48,00,410**
Service Industries	37,37,041	5,50,776	4,81,849	-	-	11,80,975	**92,39,770**
Public admin. & Defence	-	13,47,234	-	-	-	4,235	**13,51,469**
Intermediate Inputs	**1,09,90,967**	**19,64,013**	**45,70,912**	**2,41,504**	**1,44,706**	**31,68,387**	**3,47,66,896**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-43,345**
Consumption of Fixed Capital	-	-	-	-	-	-	**19,84,284**
Compensation of Employees	-	-	-	-	-	-	**59,13,926**
Operating Surplus	-	-	-	-	-	-	**93,20,264**
Gross Value Added (GVA)	-	-	-	-	-	-	**1,71,75,129**
Trade and Transportation Margin	-10,89,004	-	3,53,501	62,195	38,750	-8,994	**-1.74623E-10**
Net Indirect Taxes	5,12,849	33,689	2,55,898	13,191	9,551	1,80,966	**17,24,540**
Import with CIF adj.	8,76,717	47,850	3,88,112	85,451	33,097	4,25,935	**44,00,572**
Indian Production	**1,12,91,529**	**20,45,552**	**55,68,422**	**4,02,340**	**2,26,104**	**37,66,294**	**4,08,92,008**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2018-19

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

USING INDUSTRY (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING INDUSTRY (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	2,52,181	-	8,65,906	1,10,053	33,084	1,75,828	1,18,885	**15,55,937**
Mining & Quarrying	-2,061	-460	5,92,442	-66	-6,304	44,757	-690	**6,27,618**
Manufacturing	1,59,362	44,599	35,03,222	11,19,615	5,55,510	6,38,514	53,339	**60,74,161**
Construction	984	47,065	2,70,100	-11,770	1,13,895	3,02,554	14,548	**7,37,376**
Trade and Transportation	11,017	68,877	92,169	-54,307	5,27,840	7,51,699	92,851	**14,90,147**
Service Industries	1,90,191	80,023	6,80,688	4,95,244	4,90,243	12,29,871	34,908	**32,01,167**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**6,11,673**	**2,40,106**	**60,04,526**	**16,58,769**	**17,14,268**	**31,43,223**	**3,13,842**	**1,36,86,406**
Production Taxes Less Subsidies	-1,01,562	3,230	8,507	7,986	-13,137	51,631	-	**-43,345**
Consumption of Fixed Capital	1,99,858	59,154	4,25,809	89,904	2,60,359	8,16,767	1,32,433	**19,84,284**
Compensation of Employees	4,53,038	1,01,222	6,87,644	8,74,139	6,05,091	22,79,737	9,13,055	**59,13,926**
Operating Surplus	24,78,592	2,14,056	16,85,967	3,80,089	18,92,763	26,68,797	-	**93,20,264**
Gross Value Added (GVA)	30,29,926	3,77,662	28,07,927	13,52,118	27,45,076	58,16,932	10,45,488	**1,71,75,129**
Trade and Transportation Margin	86,271	-48,019	10,79,109	3,10,138	-3,15,232	-4,31,946	-36,767	**6,43,554**
Net Indirect Taxes	24,239	12,817	3,16,472	97,730	92,826	1,62,578	11,735	**7,18,396**
Import with CIF adj.	50,691	17,402	16,82,633	2,93,504	1,65,897	3,16,113	17,171	**25,43,410**
Indian Production	**38,02,800**	**5,99,967**	**1,18,90,666**	**37,12,259**	**44,02,835**	**90,06,900**	**13,51,469**	**3,47,66,895**

USING INDUSTRY (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING INDUSTRY (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	21,29,492	-	5,061	30,570	-	81,739	**38,02,799**
Mining & Quarrying	-32,064	4	-18,339	33,069	-2,018	-8,303	**5,99,967**
Manufacturing	25,67,296	-318	14,18,063	1,72,668	1,56,027	15,02,771	**1,18,90,668**
Construction	1,31,991	65,945	27,53,750	14,102	-1,632	10,727	**37,12,259**
Trade and Transportation	25,82,576	-445	-68,662	-8,311	-7,510	4,15,040	**44,02,834**
Service Industries	36,11,677	5,51,594	4,81,039	-594	-160	11,62,177	**90,06,900**
Public admin. & Defence	-	13,47,234	-	-	-	4,235	**13,51,469**
Intermediate Inputs	**1,09,90,967**	**19,64,013**	**45,70,912**	**2,41,504**	**1,44,706**	**31,68,387**	**3,47,66,896**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-10,89,004	-	3,53,501	62,195	38,750	-8,994	**-**
Net Indirect Taxes	5,12,849	33,689	2,55,898	13,191	9,551	1,80,966	**17,24,540**
Import with CIF adj.	8,76,717	47,850	3,88,112	85,451	33,097	4,25,935	**44,00,572**
Indian Production	**1,12,91,529**	**20,45,552**	**55,68,422**	**4,02,340**	**2,26,104**	**37,66,294**	**4,08,92,008**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT TABLE 2018-19

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	2,49,838	462	8,58,074	1,11,339	35,493	1,80,488	1,17,492	**15,53,187**
Mining & Quarrying	-	93	5,07,635	11,473	701	42,199	-	**5,62,100**
Manufacturing	1,50,705	51,117	34,19,496	10,42,914	5,82,555	7,04,652	60,662	**60,12,100**
Construction	2,585	45,987	2,96,801	-	1,15,848	2,99,262	14,617	**7,75,101**
Trade and Transportation	19,430	61,958	2,34,786	8,668	4,81,363	6,88,916	81,951	**15,77,072**
Service Industries	1,89,115	80,488	6,87,735	4,84,375	4,98,309	12,27,706	39,119	**32,06,846**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**6,11,673**	**2,40,106**	**60,04,526**	**16,58,769**	**17,14,268**	**31,43,223**	**3,13,842**	**1,36,86,406**
Production Taxes Less Subsidies	-1,01,562	3,230	8,507	7,986	-13,137	51,631	-	**-43,345**
Consumption of Fixed Capital	1,99,858	59,154	4,25,809	89,904	2,60,359	8,16,767	1,32,433	**19,84,284**
Compensation of Employees	4,53,038	1,01,222	6,87,644	8,74,139	6,05,091	22,79,737	9,13,055	**59,13,926**
Operating Surplus	24,78,592	2,14,056	16,85,967	3,80,089	18,92,763	26,68,797	-	**93,20,264**
Gross Value Added (GVA)	30,29,926	3,77,662	28,07,927	13,52,118	27,45,076	58,16,932	10,45,488	**1,71,75,129**
Trade and Transportation Margin	86,271	-48,019	10,79,109	3,10,138	-3,15,232	-4,31,946	-36,767	**6,43,554**
Net Indirect Taxes	24,239	12,817	3,16,472	97,730	92,826	1,62,578	11,735	**7,18,396**
Import with CIF adj.	50,691	17,402	16,82,633	2,93,504	1,65,897	3,16,113	17,171	**25,43,410**
Indian Production	**38,02,800**	**5,99,967**	**1,18,90,666**	**37,12,259**	**44,02,835**	**90,06,900**	**13,51,469**	**3,47,66,895**

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	21,21,449	3,083	7,689	30,155	-	87,237	**38,02,799**
Mining & Quarrying	906	-	-	28,100	-	8,861	**5,99,967**
Manufacturing	27,00,527	4,115	14,06,335	1,67,787	1,44,643	14,55,160	**1,18,90,668**
Construction	1,54,055	63,847	26,78,155	15,388	-	25,713	**37,12,259**
Trade and Transportation	23,71,442	9,603	8,401	-	-	4,36,316	**44,02,834**
Service Industries	36,42,588	5,36,132	4,70,331	74	63	11,50,865	**90,06,900**
Public admin. & Defence	-	13,47,234	-	-	-	4,235	**13,51,469**
Intermediate Inputs	**1,09,90,967**	**19,64,013**	**45,70,912**	**2,41,504**	**1,44,706**	**31,68,387**	**3,47,66,896**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-10,89,004	-	3,53,501	62,195	38,750	-8,994	**-1.51E-10**
Net Indirect Taxes	5,12,849	33,689	2,55,898	13,191	9,551	1,80,966	**17,24,540**
Import with CIF adj.	8,76,717	47,850	3,88,112	85,451	33,097	4,25,935	**44,00,572**
Indian Production	**1,12,91,529**	**20,45,552**	**55,68,422**	**4,02,340**	**2,26,104**	**37,66,294**	**4,08,92,008**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

ANNEXURE - II

INDIA: DIRECT ALLOCATION MATRIX 2016-17

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	0.08265891	-	0.08715262	0.02032704	-0.00054385	0.01203624	0.09335607	**0.04414158**
Mining & Quarrying	0.00135739	0.03291404	0.06611004	0.00291954	-0.00014534	0.01137913	-	**0.02375995**
Manufacturing	0.03642585	0.16220937	0.26936041	0.26843215	0.10736180	0.08298212	0.03541449	**0.15556659**
Construction	0.00196067	0.00613384	0.01189340	-	0.03048434	0.02450773	0.01640620	**0.01564100**
Trade and Transportation	0.00229727	0.02366065	0.07783189	-	0.04120503	0.04682529	0.07191681	**0.04531860**
Service Industries	0.04459587	0.06553904	0.03942569	0.14115311	0.14928193	0.14671563	0.03410002	**0.09690612**
Public admin. & Defence	-0.00000368	-	-0.00004487	-	0.00057365	0.00025323	0.00075659	**0.00016784**
Intermediate Inputs	**0.16929229**	**0.29045694**	**0.55172917**	**0.43283184**	**0.32821755**	**0.32469937**	**0.25195019**	**0.38150166**
Production Taxes Less Subsidies	-0.02191887	0.00469916	0.00274543	0.00201777	-0.00054151	0.00163132	-	**-0.00100557**
Consumption of Fixed Capital	0.05214825	0.09105428	0.03896062	0.02290590	0.05263993	0.08461450	0.10352928	**0.05731433**
Compensation of Employees	0.11547611	0.14934705	0.05355135	0.24836060	0.11937939	0.24270071	0.64895275	**0.16990359**
Operating Surplus	0.63310516	0.33139729	0.12867952	0.09927351	0.45175222	0.29964617	-	**0.27676875**
Gross Value Added (GVA)	0.77881065	0.57649777	0.22393692	0.37255779	0.62323002	0.62859270	0.75248202	**0.50298111**
Trade and Transportation Margin	0.03127149	0.03315567	0.05092826	0.07725529	-0.00626478	-0.01027464	-0.02441098	**0.02291389**
Net Indirect Taxes	0.00649788	0.02752582	0.04598840	0.04154454	0.01886142	0.01641714	0.00696834	**0.02686647**
Import with CIF adj.	0.01412770	0.07236379	0.12741725	0.07581054	0.03595579	0.04056543	0.01301043	**0.06573686**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	0.20246154	-	0.00190393	0.07770264	-	0.02273736	**0.09877918**
Mining & Quarrying	0.00011427	-	-	0.09446475	-	0.00383334	**0.02151367**
Manufacturing	0.17714772	-	0.20945799	0.31743372	0.61224602	0.35654441	**0.25043391**
Construction	0.01063053	0.02404982	0.55009637	0.15119943	-	0.00486143	**0.09262501**
Trade and Transportation	0.24496958	-	-	-	-	0.12383884	**0.12035669**
Service Industries	0.35658870	0.26074175	0.10147598	-	-	0.31302154	**0.24029596**
Public admin. & Defence	-	0.68358250	-	-	-	0.00132576	**0.03398000**
Intermediate Inputs	**0.99191234**	**0.96837407**	**0.86293428**	**0.64080053**	**0.61224602**	**0.82616268**	**0.85798442**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.10063553	-	0.05421823	0.13899175	0.19284285	-0.00182317	**0.0000000087**
Net Indirect Taxes	0.03656381	0.00653623	0.02847347	0.05438424	0.07580048	0.06138937	**0.04408045**
Import with CIF adj.	0.07215937	0.02508970	0.05437403	0.16582348	0.11911066	0.11427112	**0.09793512**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2016-17

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	0.08164754	0.01465240	0.07888775	0.02220615	0.01268710	0.01240243	0.09335607	**0.04414158**
Mining & Quarrying	0.00150175	0.03798306	0.06020535	0.00475773	0.00998995	0.01123477	-	**0.02375995**
Manufacturing	0.03709570	0.17963854	0.25604711	0.26803474	0.13011379	0.08377873	0.03541449	**0.15556659**
Construction	0.00228370	0.00741061	0.01300793	0.00041740	0.02743841	0.02446379	0.01640620	**0.01564100**
Trade and Transportation	0.00293595	0.03293436	0.07358986	0.00236136	0.04662003	0.04653105	0.07191681	**0.04531860**
Service Industries	0.04605830	0.06243228	0.04881241	0.13819006	0.13310765	0.14585320	0.03410002	**0.09690612**
Public admin. & Defence	-	-	-	-	0.00046845	0.00025765	0.00075659	**0.00016784**
Intermediate Inputs	**0.17152293**	**0.33505126**	**0.53055041**	**0.43596745**	**0.36042538**	**0.32452161**	**0.25195019**	**0.38150167**
Production Taxes Less Subsidies	-0.02158128	0.00429710	0.00253451	0.00203435	0.00004172	0.00144985	-	**-0.00100557**
Consumption of Fixed Capital	0.05261300	0.08168590	0.04061540	0.02347417	0.05206104	0.08360850	0.10352928	**0.05731434**
Compensation of Employees	0.11729721	0.13314445	0.06211312	0.24238426	0.11540535	0.23877385	0.64895275	**0.16990359**
Operating Surplus	0.62832310	0.29848095	0.15417745	0.10103528	0.39777254	0.30434291	-	**0.27676874**
Gross Value Added (GVA)	0.77665204	0.51760840	0.25944048	0.36892806	0.56528065	0.62817512	0.75248202	**0.50298111**
Trade and Transportation Margin	0.03067676	0.03569284	0.04681565	0.07627854	0.00205494	-0.00976178	-0.02441098	**0.02291389**
Net Indirect Taxes	0.00664046	0.03053187	0.04371020	0.04161403	0.02273233	0.01649811	0.00696834	**0.02686647**
Import with CIF adj.	0.01450780	0.08111564	0.11948327	0.07721192	0.04950670	0.04056693	0.01301043	**0.06573687**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING PRODUCTS (To) / SUPPLYING PRODUCTS (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	0.20241863	-	0.00191977	0.07660320	-	0.02281463	**0.09877917**
Mining & Quarrying	0.00011424	-	-	0.09312814	-	0.00384637	**0.02151367**
Manufacturing	0.17711017	-	0.21120054	0.31294224	0.49239456	0.35775611	**0.25043390**
Construction	0.01062828	0.02405748	0.55467281	0.14906005	-	0.00487795	**0.09262501**
Trade and Transportation	0.24491766	-	-	-	-	0.12425970	**0.12035668**
Service Industries	0.35651312	0.26082472	0.10232020	-	-	0.31408533	**0.24029595**
Public admin. & Defence	-	0.68380001	-	-	-	0.00133026	**0.03397999**
Intermediate Inputs	**0.99170210**	**0.96868220**	**0.87011332**	**0.63173363**	**0.49239456**	**0.82897036**	**0.85798438**
Production Taxes Less Subsidies	-	-	-	-	-	-	-
Consumption of Fixed Capital	-	-	-	-	-	-	-
Compensation of Employees	-	-	-	-	-	-	-
Operating Surplus	-	-	-	-	-	-	-
Gross Value Added (GVA)	-	-	-	-	-	-	-
Trade and Transportation Margin	-0.09917525	0.00216802	0.05066722	0.14258027	0.20370069	-0.00560778	**0.0000000087**
Net Indirect Taxes	0.03614779	0.00647795	0.02697034	0.05719184	0.11000350	0.06168148	**0.04408046**
Import with CIF adj.	0.07132537	0.02267183	0.05224912	0.16849426	0.19390125	0.11495593	**0.09793515**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2016-17

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Agriculture* [1]	Mining & Quarrying [2]	Manufacturing [3]	Construction [4]	Trade and Transportation [5]	Service Industries [6]	Public admin. & Defence [7]	**Intermediate Usage [8]**
Agriculture*	0.08277152	-0.00000099	0.07826110	0.02078110	0.00007812	0.01222042	0.09471218	**0.04478199**
Mining & Quarrying	0.00090837	0.03202531	0.05487778	-0.00137413	-0.00132853	0.01006256	-0.00056507	**0.02127773**
Manufacturing	0.04105934	0.18976120	0.27736440	0.29967310	0.12274375	0.09204918	0.03923120	**0.17233245**
Construction	0.00184195	0.00444459	0.00974851	-0.00321053	0.03019474	0.02355409	0.01598590	**0.01379472**
Trade and Transportation	0.00006940	0.01240355	0.05542489	-0.02192556	0.03650993	0.04252558	0.07275892	**0.03504689**
Service Industries	0.04473867	0.06810066	0.04313132	0.14225194	0.15359750	0.14443382	0.02907042	**0.09409997**
Public admin. & Defence	-	-	-	-	0.00058228	0.00025367	0.00075659	**0.00016784**
Intermediate Inputs	**0.17138926**	**0.30673432**	**0.51880800**	**0.43619591**	**0.34237779**	**0.32509932**	**0.25195015**	**0.38150158**
Production Taxes Less Subsidies	-0.02156546	0.00496250	0.00247841	0.00203346	-0.00045372	0.00163244	-	**-0.00100557**
Consumption of Fixed Capital	0.05257377	0.09615706	0.03971650	0.02308394	0.05657994	0.08470536	0.10352928	**0.05731435**
Compensation of Employees	0.11721016	0.15771662	0.06073842	0.25029103	0.13092072	0.24294847	0.64895278	**0.16990363**
Operating Surplus	0.62785934	0.34996916	0.15076518	0.10004513	0.46368895	0.30007600	-	**0.27676881**
Gross Value Added (GVA)	0.77607781	0.60880534	0.25369851	0.37545356	0.65073589	0.62936228	0.75248206	**0.50298121**
Trade and Transportation Margin	0.03109816	0.02252099	0.05071330	0.07612311	-0.01739562	-0.01028026	-0.02441097	**0.02291389**
Net Indirect Taxes	0.00673066	0.01740433	0.04734930	0.04024973	0.01092662	0.01600728	0.00696834	**0.02686646**
Import with CIF adj.	0.01470412	0.04453502	0.12943089	0.07197768	0.01335532	0.03981138	0.01301042	**0.06573685**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING INDUSTRY (To) / SUPPLYING INDUSTRY (From)	Private Final Consumption Expenditure [9]	Government Final Consumption Expenditure [10]	Gross Fixed Capital Formation [11]	Change in Stock [12]	Valuables [13]	Export [14]	**Total Supply [15]**
Agriculture*	0.20530876	-	0.00189066	0.08213085	-0.00000486	0.02321948	**0.10021286**
Mining & Quarrying	-0.00271105	-	-0.00327331	0.09314350	-0.01347206	-0.00186801	**0.01751776**
Manufacturing	0.19615037	-	0.22725698	0.36637019	0.93532907	0.39760442	**0.27742394**
Construction	0.00852426	0.02434265	0.53634154	0.15360611	-0.01002060	0.00063414	**0.08965288**
Trade and Transportation	0.24305621	-0.00011293	-0.01662369	-0.02673068	-0.06824370	0.10196588	**0.10623619**
Service Industries	0.34113348	0.26402927	0.09958411	-0.00088492	0.00074483	0.30878197	**0.23296080**
Public admin. & Defence	-	0.69190539	-	-	-	0.00133460	**0.03398000**
Intermediate Inputs	**0.99146203**	**0.98016438**	**0.84517630**	**0.66763505**	**0.84433267**	**0.83167248**	**0.85798442**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.10205349	-0.00243013	0.06039485	0.12851441	0.07292089	0.00242982	**0.0000000087**
Net Indirect Taxes	0.03719660	0.00409343	0.03214839	0.04864157	0.04053943	0.05802345	**0.04408045**
Import with CIF adj.	0.07339485	0.01817232	0.06228046	0.15520897	0.04220701	0.10787425	**0.09793512**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2016-17

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

USING INDUSTRY (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING INDUSTRY (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.08186844	0.00040133	0.07865330	0.02130277	0.00097056	0.01292560	0.09355838	**0.04471968**
Mining & Quarrying	0.00122134	0.02747974	0.04869802	0.00239221	0.00034474	0.00927502	-	**0.01934684**
Manufacturing	0.03803881	0.17688540	0.27772010	0.27112241	0.11496392	0.09398561	0.04755256	**0.16804138**
Construction	0.00220884	0.00608745	0.01250707	-	0.02938532	0.02375757	0.01587976	**0.01513910**
Trade and Transportation	0.00346174	0.02182157	0.06240804	0.00308608	0.03826872	0.04254691	0.06110063	**0.04014134**
Service Industries	0.04460757	0.06514095	0.04704715	0.13764827	0.14538531	0.14242031	0.03310227	**0.09394549**
Public admin. & Defence	-	-	-	-	0.00056102	0.00025372	0.00075659	**0.00016784**
Intermediate Inputs	**0.17140674**	**0.29781643**	**0.52703368**	**0.43555173**	**0.32987960**	**0.32516475**	**0.25195019**	**0.38150166**
Production Taxes Less Subsidies	-0.02156765	0.00481822	0.00251771	0.00203045	-0.00043716	0.00163277	-	**-0.00100557**
Consumption of Fixed Capital	0.05257912	0.09336137	0.04034619	0.02304984	0.05451452	0.08472238	0.10352928	**0.05731433**
Compensation of Employees	0.11722208	0.15313114	0.06170140	0.24992128	0.12614153	0.24299727	0.64895275	**0.16990359**
Operating Surplus	0.62792321	0.33979410	0.15315549	0.09989734	0.44676223	0.30013627	-	**0.27676875**
Gross Value Added (GVA)	0.77615675	0.59110484	0.25772079	0.37489892	0.62698112	0.62948868	0.75248202	**0.50298111**
Trade and Transportation Margin	0.03051370	0.02768147	0.04726689	0.07524620	-0.00594594	-0.00997192	-0.02441098	**0.02291389**
Net Indirect Taxes	0.00686333	0.02298115	0.04535330	0.04046414	0.01660414	0.01593996	0.00696834	**0.02686647**
Import with CIF adj.	0.01505948	0.06041611	0.12262534	0.07383902	0.03248108	0.03937852	0.01301043	**0.06573686**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING INDUSTRY (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING INDUSTRY (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.20445446	0.00157396	0.00248298	0.07950487	-	0.02486880	**0.10021284**
Mining & Quarrying	0.00009298	-	-	0.07870431	-	0.00315463	**0.01751778**
Manufacturing	0.21769293	0.00162886	0.22499360	0.34771923	0.60796086	0.38225711	**0.27742396**
Construction	0.01028269	0.02352886	0.52672593	0.14974425	-	0.00475561	**0.08965284**
Trade and Transportation	0.21321089	0.00572611	0.00218107	-	-	0.11191956	**0.10623617**
Service Industries	0.34552988	0.25540156	0.09728215	-	-	0.30667587	**0.23296083**
Public admin. & Defence	-	0.69094604	-	-	-	0.00133989	**0.03398000**
Intermediate Inputs	**0.99126383**	**0.97880538**	**0.85366572**	**0.65567267**	**0.60796086**	**0.83497149**	**0.85798442**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.10057368	-	0.05629597	0.13323700	0.13362863	-0.00171488	**0.0000000087**
Net Indirect Taxes	0.03676982	0.00438036	0.03043758	0.05213254	0.09568328	0.05827367	**0.04408045**
Import with CIF adj.	0.07254003	0.01681426	0.05960073	0.15895780	0.16272723	0.10846973	**0.09793512**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2017-18

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

USING PRODUCTS (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING PRODUCTS (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06669570	-	0.08424280	0.02200765	0.00111114	0.01612463	0.09061762	**0.04353629**
Mining & Quarrying	0.00019613	0.00028625	0.05858067	0.00276901	-0.00011995	0.00893154	-	**0.02030886**
Manufacturing	0.03888177	0.07951450	0.27011449	0.24943112	0.13095456	0.06355048	0.03781499	**0.15224486**
Construction	0.00038700	0.08861952	0.03197360	0.00106955	0.01792009	0.02581340	0.01091525	**0.02164693**
Trade and Transportation	0.00432612	0.16713439	0.00975896	-	0.09494977	0.07479554	0.06978596	**0.04366756**
Service Industries	0.04313977	0.11466794	0.04002015	0.17321602	0.11002283	0.14154215	0.02394937	**0.09330609**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**0.15362648**	**0.45022259**	**0.49469068**	**0.44849336**	**0.35483844**	**0.33075773**	**0.23308319**	**0.37471060**
Production Taxes Less Subsidies	-0.02569670	0.00459760	0.00101797	0.00200432	-0.00297776	0.00545235	-	**-0.00129834**
Consumption of Fixed Capital	0.05140334	0.10083063	0.03745215	0.02339838	0.05524150	0.09020384	0.09974966	**0.05811727**
Compensation of Employees	0.11999189	0.18162362	0.05225682	0.24497051	0.13496061	0.24922505	0.67043777	**0.17373390**
Operating Surplus	0.65566527	0.32811730	0.13503057	0.09825162	0.44015866	0.30789573	-	**0.28006594**
Gross Value Added (GVA)	0.80136381	0.61516915	0.22575751	0.36862482	0.62738301	0.65277697	0.77018743	**0.51061877**
Trade and Transportation Margin	0.02539671	-0.12137716	0.11336536	0.07812439	-0.04429082	-0.03868567	-0.02500349	**0.02512979**
Net Indirect Taxes	0.00613679	0.02472822	0.02877448	0.02893353	0.02132281	0.01784008	0.00880684	**0.02128663**
Import with CIF adj.	0.01347621	0.03125720	0.13741198	0.07582390	0.04074656	0.03731089	0.01292603	**0.06825421**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING PRODUCTS (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING PRODUCTS (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.20100352	-	0.00083865	0.11362052	-	0.02281292	**0.09792330**
Mining & Quarrying	0.00009318	-	-	0.09186562	-	0.00324342	**0.01853093**
Manufacturing	0.19110769	-	0.23035391	0.33639599	0.62367267	0.35607592	**0.25593417**
Construction	0.01010759	0.01612311	0.50647664	0.07168062	-	0.00560231	**0.09350664**
Trade and Transportation	0.26238723	-	-	-	-	0.12200270	**0.12329795**
Service Industries	0.33066923	0.28055165	0.07769191	-	-	0.32018090	**0.22822014**
Public admin. & Defence	-	0.66453245	-	-	-	0.00132731	**0.03442193**
Intermediate Inputs	**0.99536844**	**0.96120721**	**0.81536112**	**0.61356275**	**0.62367267**	**0.83124549**	**0.85183507**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.11764437	-	0.06593916	0.16112590	0.17791572	0.00370442	**0.0000000046**
Net Indirect Taxes	0.04676381	0.01578627	0.04946820	0.03532877	0.04835704	0.05087213	**0.04444476**
Import with CIF adj.	0.07551212	0.02300652	0.06923152	0.18998258	0.15005457	0.11417796	**0.10372017**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2017-18

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

USING PRODUCTS (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING PRODUCTS (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06598605	0.01339541	0.07746791	0.02328578	0.01239634	0.01631845	0.09061762	**0.04353629**
Mining & Quarrying	0.00031871	0.00952499	0.05371537	0.00394331	0.00778328	0.00883399	-	**0.02030886**
Manufacturing	0.03922793	0.11048793	0.25863735	0.24964018	0.14660461	0.06521713	0.03781499	**0.15224486**
Construction	0.00074380	0.07874235	0.03149650	0.00177124	0.02010850	0.02552753	0.01091525	**0.02164693**
Trade and Transportation	0.00531500	0.14116351	0.01693843	0.00039165	0.08325237	0.07458786	0.06978596	**0.04366756**
Service Industries	0.04452062	0.10287902	0.04649199	0.17029480	0.10216559	0.14009097	0.02394937	**0.09330609**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**0.15611211**	**0.45619321**	**0.48474754**	**0.44932695**	**0.37231068**	**0.33057593**	**0.23308319**	**0.37471060**
Production Taxes Less Subsidies	-0.02525960	0.00394580	0.00082817	0.00197727	-0.00214780	0.00509326	-	**-0.00129834**
Consumption of Fixed Capital	0.05194782	0.09019072	0.03929830	0.02376596	0.05421160	0.08916963	0.09974966	**0.05811727**
Compensation of Employees	0.12180538	0.16073499	0.06082418	0.24072643	0.12848947	0.24577027	0.67043777	**0.17373390**
Operating Surplus	0.65078513	0.29841466	0.15634239	0.09959401	0.39554976	0.31205195	-	**0.28006594**
Gross Value Added (GVA)	0.79927873	0.55328616	0.25729304	0.36606367	0.57610303	0.65208511	0.77018743	**0.51061877**
Trade and Transportation Margin	0.02449746	-0.08305574	0.10024330	0.07863221	-0.02372360	-0.03801558	-0.02500349	**0.02512979**
Net Indirect Taxes	0.00630102	0.02533562	0.02824063	0.02891737	0.02217662	0.01786430	0.00880684	**0.02128663**
Import with CIF adj.	0.01381068	0.04824075	0.12947548	0.07705980	0.05313327	0.03749023	0.01292603	**0.06825421**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING PRODUCTS (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING PRODUCTS (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.20100352	-	0.00083865	0.11362052	-	0.02281292	**0.09792330**
Mining & Quarrying	0.00009318	-	-	0.09186562	-	0.00324342	**0.01853093**
Manufacturing	0.19110769	-	0.23035391	0.33639599	0.62367267	0.35607592	**0.25593417**
Construction	0.01010759	0.01612311	0.50647664	0.07168062	-	0.00560231	**0.09350664**
Trade and Transportation	0.26238723	-	-	-	-	0.12200270	**0.12329795**
Service Industries	0.33066923	0.28055165	0.07769191	-	-	0.32018090	**0.22822014**
Public admin. & Defence	-	0.66453245	-	-	-	0.00132731	**0.03442193**
Intermediate Inputs	**0.99536844**	**0.96120721**	**0.81536112**	**0.61356275**	**0.62367267**	**0.83124549**	**0.85183507**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.11764437	-	0.06593916	0.16112590	0.17791572	0.00370442	**0.0000000046**
Net Indirect Taxes	0.04676381	0.01578627	0.04946820	0.03532877	0.04835704	0.05087213	**0.04444476**
Import with CIF adj.	0.07551212	0.02300652	0.06923152	0.18998258	0.15005457	0.11417796	**0.10372017**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2017-18

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES

USING INDUSTRY (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING INDUSTRY (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06688273	-	0.07676449	0.02247011	0.00177716	0.01634168	0.09190733	**0.04415592**
Mining & Quarrying	-0.00017230	-0.00075358	0.04931707	-0.00035617	-0.00145627	0.00812652	-0.00047344	**0.01840279**
Manufacturing	0.04278064	0.09219617	0.27576210	0.27401792	0.14687113	0.06951016	0.04126682	**0.16614163**
Construction	0.00041291	0.09344910	0.02864380	-0.00103893	0.01795334	0.02527760	0.01059668	**0.02036430**
Trade and Transportation	0.00268174	0.17833226	-0.00070697	-0.01799629	0.09286229	0.07305135	0.06979482	**0.03447490**
Service Industries	0.04342735	0.11515333	0.04381752	0.17439536	0.11288306	0.13867373	0.01999098	**0.09117106**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**0.15601306**	**0.47837728**	**0.47359801**	**0.45149200**	**0.37089071**	**0.33098104**	**0.23308319**	**0.37471060**
Production Taxes Less Subsidies	-0.02524357	0.00488511	0.00080896	0.00201772	-0.00279029	0.00544185	-	**-0.00129834**
Consumption of Fixed Capital	0.05191486	0.10713608	0.03839237	0.02355482	0.05925630	0.09019507	0.09974966	**0.05811727**
Compensation of Employees	0.12172810	0.19298146	0.05941850	0.24660839	0.14589872	0.24917245	0.67043777	**0.17373390**
Operating Surplus	0.65037221	0.34863613	0.15273992	0.09890853	0.45606143	0.30826145	-	**0.28006594**
Gross Value Added (GVA)	0.79877160	0.65363878	0.25135976	0.37108947	0.65842616	0.65307082	0.77018743	**0.51061877**
Trade and Transportation Margin	0.02483036	-0.15326936	0.10688471	0.07604926	-0.06672537	-0.03806211	-0.02500349	**0.02512979**
Net Indirect Taxes	0.00638664	0.01942869	0.03010974	0.02839475	0.01769312	0.01744533	0.00880684	**0.02128663**
Import with CIF adj.	0.01399835	0.00182460	0.13804778	0.07297452	0.01971539	0.03656492	0.01292603	**0.06825421**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING INDUSTRY (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING INDUSTRY (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.20385085	-	0.00083649	0.11779236	-	0.02316025	**0.09931699**
Mining & Quarrying	-0.00229919	0.00000013	-0.00283621	0.08959716	-0.01048118	-0.00121571	**0.01532672**
Manufacturing	0.20852965	-0.00001170	0.24721638	0.37524892	0.91358631	0.38895422	**0.27929275**
Construction	0.00849554	0.01622170	0.49617400	0.07037430	-0.00704928	0.00260426	**0.09134996**
Trade and Transportation	0.25855642	-0.00046047	-0.01610433	-0.02425256	-0.05905221	0.10120594	**0.10966831**
Service Industries	0.31816956	0.28277609	0.07656067	-0.00159513	0.00014752	0.31602133	**0.22245841**
Public admin. & Defence	-	0.66867858	-	-	-	0.00132861	**0.03442193**
Intermediate Inputs	**0.99530283**	**0.96720434**	**0.80184701**	**0.62716505**	**0.83715116**	**0.83205891**	**0.85183507**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.11931087	-0.00222820	0.07076675	0.15678410	0.12033355	0.00854539	**0.0000000046**
Net Indirect Taxes	0.04742624	0.01421318	0.05308878	0.03017214	-0.02964023	0.04875878	**0.04444476**
Import with CIF adj.	0.07658180	0.02081068	0.07429747	0.18587870	0.07215551	0.11063693	**0.10372017**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2017-18

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

USING INDUSTRY (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING INDUSTRY (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06624300	0.00069242	0.07761667	0.02316314	0.00235580	0.01697460	0.09076387	**0.04410609**
Mining & Quarrying	0.00026354	0.00023411	0.04435023	0.00229992	0.00018088	0.00737993	-	**0.01679723**
Manufacturing	0.04016177	0.10429757	0.27068645	0.25146486	0.14275075	0.07676778	0.04796736	**0.16266248**
Construction	0.00072648	0.08560759	0.03071596	0.00104931	0.01782966	0.02521618	0.01066349	**0.02114766**
Trade and Transportation	0.00534901	0.14354011	0.01530912	0.00312341	0.08281138	0.06663365	0.06018231	**0.03906452**
Service Industries	0.04333313	0.11081707	0.04521914	0.16929252	0.10870132	0.13796459	0.02350615	**0.09093263**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**0.15607693**	**0.44518885**	**0.48389756**	**0.45039315**	**0.35462978**	**0.33093673**	**0.23308319**	**0.37471060**
Production Taxes Less Subsidies	-0.02525391	0.00454620	0.00082656	0.00201281	-0.00266796	0.00544112	-	**-0.00129834**
Consumption of Fixed Capital	0.05193611	0.09970329	0.03922731	0.02349749	0.05665833	0.09018300	0.09974966	**0.05811727**
Compensation of Employees	0.12177793	0.17959296	0.06071070	0.24600819	0.13950210	0.24913910	0.67043777	**0.17373390**
Operating Surplus	0.65063848	0.32444877	0.15606163	0.09866781	0.43606637	0.30822018	-	**0.28006594**
Gross Value Added (GVA)	0.79909861	0.60829122	0.25682619	0.37018630	0.62955884	0.65298340	0.77018743	**0.51061877**
Trade and Transportation Margin	0.02396287	-0.09926727	0.09698574	0.07664579	-0.03922902	-0.03772233	-0.02500349	**0.02512979**
Net Indirect Taxes	0.00654365	0.02022377	0.02985214	0.02838593	0.01883234	0.01740542	0.00880684	**0.02128663**
Import with CIF adj.	0.01431793	0.02556343	0.13243836	0.07438884	0.03620806	0.03639678	0.01292603	**0.06825421**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING INDUSTRY (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING INDUSTRY (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.20295701	0.00172483	0.00130522	0.11464232	-	0.02487855	**0.09931699**
Mining & Quarrying	0.00007705	-	-	0.07666433	-	0.00269455	**0.01532672**
Manufacturing	0.22917045	0.00115322	0.24078059	0.35710438	0.63240667	0.37650313	**0.27929276**
Construction	0.00987126	0.01585761	0.49182753	0.07065710	-	0.00549748	**0.09134996**
Trade and Transportation	0.23052441	0.00507155	0.00138665	-	-	0.11070156	**0.10966830**
Service Industries	0.32244554	0.27487100	0.07517109	0.00001246	0.00002084	0.31334070	**0.22245841**
Public admin. & Defence	-	0.66902005	-	-	-	0.00133323	**0.03442193**
Intermediate Inputs	**0.99504571**	**0.96769825**	**0.81047109**	**0.61908060**	**0.63242751**	**0.83494919**	**0.85183507**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.11759911	-	0.06703342	0.15882522	0.15537006	0.00366289	**4.61414E-09**
Net Indirect Taxes	0.04684638	0.01314482	0.05066199	0.03482431	0.05429391	0.04974121	**0.04444476**
Import with CIF adj.	0.07570701	0.01915693	0.07183351	0.18726986	0.15790853	0.11164671	**0.10372017**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2018-19

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

USING PRODUCTS (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING PRODUCTS (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06604939	-	0.07671579	0.02924273	0.00696303	0.01923401	0.08677107	**0.04414480**
Mining & Quarrying	-0.00008083	0.00019518	0.05776697	0.00388265	-0.00001510	0.00586320	-	**0.02031168**
Manufacturing	0.03852383	0.06901420	0.28438473	0.27978755	0.11902959	0.06563689	0.03661774	**0.16208379**
Construction	0.00023873	0.07923934	0.02526821	-	0.02692916	0.03436322	0.01118071	**0.02304747**
Trade and Transportation	0.00368506	0.11415569	0.01484594	-	0.12286945	0.08381685	0.06804116	**0.04946908**
Service Industries	0.04984010	0.13759335	0.05428716	0.13392249	0.11511798	0.13993247	0.02961191	**0.09460522**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**0.15825627**	**0.40019776**	**0.51326881**	**0.44683541**	**0.39089412**	**0.34884663**	**0.23222259**	**0.39366203**
Production Taxes Less Subsidies	-0.02715453	0.00538363	0.00082058	0.00215125	-0.00331518	0.00574271	-	**-0.00124673**
Consumption of Fixed Capital	0.05202896	0.09859539	0.03379430	0.02421814	0.05793380	0.09074674	0.09799192	**0.05707395**
Compensation of Employees	0.11728281	0.16871256	0.04993271	0.23547360	0.13303093	0.25331759	0.67560211	**0.17010222**
Operating Surplus	0.65668155	0.35677951	0.12411144	0.10238752	0.43497000	0.29630832	-	**0.26807870**
Gross Value Added (GVA)	0.79883879	0.62947109	0.20865903	0.36423051	0.62261955	0.64611535	0.77359403	**0.49400813**
Trade and Transportation Margin	0.02366105	-0.08003597	0.10179523	0.08354433	-0.07249252	-0.04803255	-0.02720507	**0.01851053**
Net Indirect Taxes	0.00621313	0.02136222	0.02698827	0.02632617	0.02119868	0.01804213	0.00868300	**0.02066321**
Import with CIF adj.	0.01303077	0.02900489	0.14928865	0.07906358	0.03778017	0.03502844	0.01270545	**0.07315610**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING PRODUCTS (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING PRODUCTS (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.18608394	-	0.00090251	0.07394963	-	0.02131848	**0.09173149**
Mining & Quarrying	0.00010083	-	-	0.08657207	-	0.00294340	**0.01843260**
Manufacturing	0.21110309	-	0.23782168	0.39271494	0.64394963	0.36867783	**0.26980169**
Construction	0.01410866	0.03194060	0.50055344	0.03901175	-	0.00702836	**0.09384922**
Trade and Transportation	0.23122094	-	-	-	-	0.12439823	**0.11739237**
Service Industries	0.33106040	0.26653210	0.08711530	-	-	0.31225841	**0.22595541**
Public admin. & Defence	-	0.65195521	-	-	-	0.00111981	**0.03304971**
Intermediate Inputs	**0.97367785**	**0.95042791**	**0.82639294**	**0.59224838**	**0.64394963**	**0.83774453**	**0.85021249**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.09646902	-	0.06265277	0.15767599	0.19598271	-0.00250699	**-**
Net Indirect Taxes	0.04534065	0.02048123	0.04437436	0.03344105	0.03178643	0.04912430	**0.04217303**
Import with CIF adj.	0.07745052	0.02909086	0.06657993	0.21663458	0.12828124	0.11563816	**0.10761447**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2018-19

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

USING PRODUCTS (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING PRODUCTS (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06541275	0.01465514	0.07180903	0.03062070	0.01482988	0.01949640	0.08677107	**0.04414480**
Mining & Quarrying	-	0.01109783	0.05361352	0.00549599	0.00634663	0.00592517	-	**0.02031168**
Manufacturing	0.03889254	0.11068710	0.27318279	0.27951960	0.13494119	0.06730796	0.03661774	**0.16208379**
Construction	0.00070279	0.06833752	0.02580794	0.00084561	0.02705148	0.03400492	0.01118071	**0.02304747**
Trade and Transportation	0.00477478	0.09518615	0.02120410	0.00070872	0.10986634	0.08379123	0.06804116	**0.04946908**
Service Industries	0.05106527	0.12161127	0.05929262	0.13150364	0.10954085	0.13866427	0.02961191	**0.09460522**
Public admin. & Defence	-	-	-	-	-	-	-	-
Intermediate Inputs	**0.16084812**	**0.42157502**	**0.50490999**	**0.44869426**	**0.40257637**	**0.34918994**	**0.23222259**	**0.39366203**
Production Taxes Less Subsidies	-0.02670716	0.00443122	0.00071763	0.00210566	-0.00254568	0.00538086	-	**-0.00124673**
Consumption of Fixed Capital	0.05255549	0.08578601	0.03583431	0.02461156	0.05650275	0.08972213	0.09799192	**0.05707395**
Compensation of Employees	0.11913275	0.14609044	0.05791582	0.22971962	0.12846280	0.24964298	0.67560211	**0.17010222**
Operating Surplus	0.65178082	0.31291722	0.14185656	0.10371626	0.39659967	0.30007042	-	**0.26807870**
Gross Value Added (GVA)	0.79676190	0.54922490	0.23632432	0.36015310	0.57901954	0.64481639	0.77359403	**0.49400813**
Trade and Transportation Margin	0.02268608	-0.04519173	0.09069202	0.08374310	-0.05291254	-0.04747653	-0.02720507	**0.01851053**
Net Indirect Taxes	0.00637399	0.02243393	0.02661142	0.02633334	0.02171407	0.01806863	0.00868300	**0.02066321**
Import with CIF adj.	0.01332991	0.05195789	0.14146224	0.08107620	0.04960256	0.03540157	0.01270545	**0.07315610**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING PRODUCTS (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING PRODUCTS (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.18602734	-	0.00089647	0.07494841	-	0.02140764	**0.09173149**
Mining & Quarrying	0.00010080	-	-	0.08774133	-	0.00295571	**0.01843260**
Manufacturing	0.21103887	-	0.23623026	0.39801905	0.63999774	0.37021964	**0.26980169**
Construction	0.01410437	0.03226694	0.49720391	0.03953866	-	0.00705776	**0.09384922**
Trade and Transportation	0.23115061	-	-	-	-	0.12491846	**0.11739237**
Service Industries	0.33095970	0.26925526	0.08653236	-	-	0.31356428	**0.22595541**
Public admin. & Defence	-	0.65861625	-	-	-	0.00112449	**0.03304971**
Intermediate Inputs	**0.97338168**	**0.96013845**	**0.82086300**	**0.60024745**	**0.63999774**	**0.84124797**	**0.85021249**
Production Taxes Less Subsidies	-	-	-	-	-	-	-
Consumption of Fixed Capital	-	-	-	-	-	-	-
Compensation of Employees	-	-	-	-	-	-	-
Operating Surplus	-	-	-	-	-	-	-
Gross Value Added (GVA)	-	-	-	-	-	-	-
Trade and Transportation Margin	-0.09644438	-	0.06348307	0.15458278	0.17138033	-0.00238812	**-4.27035E-18**
Net Indirect Taxes	0.04541895	0.01646922	0.04595525	0.03278502	0.04224125	0.04804892	**0.04217303**
Import with CIF adj.	0.07764375	0.02339233	0.06969868	0.21238475	0.14638068	0.11309122	**0.10761447**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

***Agriculture** - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2018-19

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES

USING INDUSTRY (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING INDUSTRY (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06631456	-	0.07282230	0.02964588	0.00751421	0.01952148	0.08796734	**0.04475340**
Mining & Quarrying	-0.00054197	-0.00076619	0.04982412	-0.00001786	-0.00143175	0.00496918	-0.00051042	**0.01805218**
Manufacturing	0.04190640	0.07433651	0.29461945	0.30159936	0.12617104	0.07089169	0.03946758	**0.17471107**
Construction	0.00025868	0.07844651	0.02271528	-0.00317057	0.02586851	0.03359135	0.01076486	**0.02120914**
Trade and Transportation	0.00289715	0.11480158	0.00775140	-0.01462920	0.11988639	0.08345817	0.06870392	**0.04286108**
Service Industries	0.05001329	0.13337934	0.05724555	0.13340780	0.11134724	0.13654759	0.02582932	**0.09207516**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**0.16084812**	**0.40019776**	**0.50497809**	**0.44683541**	**0.38935563**	**0.34897945**	**0.23222259**	**0.39366203**
Production Taxes Less Subsidies	-0.02670716	0.00538363	0.00071544	0.00215125	-0.00298376	0.00573238	-	**-0.00124673**
Consumption of Fixed Capital	0.05255549	0.09859539	0.03581036	0.02421814	0.05913440	0.09068237	0.09799192	**0.05707395**
Compensation of Employees	0.11913275	0.16871256	0.05783057	0.23547360	0.13743214	0.25311007	0.67560211	**0.17010222**
Operating Surplus	0.65178082	0.35677951	0.14178911	0.10238752	0.42989646	0.29630584	-	**0.26807870**
Gross Value Added (GVA)	0.79676190	0.62947109	0.23614547	0.36423051	0.62347925	0.64583066	0.77359403	**0.49400813**
Trade and Transportation Margin	0.02268608	-0.08003597	0.09075258	0.08354433	-0.07159754	-0.04795722	-0.02720507	**0.01851053**
Net Indirect Taxes	0.00637399	0.02136222	0.02661516	0.02632617	0.02108318	0.01805039	0.00868300	**0.02066321**
Import with CIF adj.	0.01332991	0.02900489	0.14150870	0.07906358	0.03767949	0.03509673	0.01270545	**0.07315610**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING INDUSTRY (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING INDUSTRY (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.18859201	-	0.00090883	0.07598169	-	0.02170278	**0.09299615**
Mining & Quarrying	-0.00283966	0.00000201	-0.00329348	0.08219113	-0.00892448	-0.00220453	**0.01467198**
Manufacturing	0.22736474	-0.00015548	0.25466155	0.42915830	0.69006737	0.39900527	**0.29078220**
Construction	0.01168940	0.03223808	0.49452974	0.03504875	-0.00721976	0.00284827	**0.09078201**
Trade and Transportation	0.22871798	-0.00021764	-0.01233054	-0.02065679	-0.03321659	0.11019856	**0.10766980**
Service Industries	0.31985721	0.26965522	0.08638689	-0.00147562	-0.00070880	0.30857314	**0.22026064**
Public admin. & Defence	-	0.65861625	-	-	-	0.00112449	**0.03304971**
Intermediate Inputs	**0.97338168**	**0.96013845**	**0.82086300**	**0.60024745**	**0.63999774**	**0.84124797**	**0.85021249**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.09644438	-	0.06348307	0.15458278	0.17138033	-0.00238812	**-**
Net Indirect Taxes	0.04541895	0.01646922	0.04595525	0.03278502	0.04224125	0.04804892	**0.04217303**
Import with CIF adj.	0.07764375	0.02339233	0.06969868	0.21238475	0.14638068	0.11309122	**0.10761447**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: DIRECT ALLOCATION MATRIX 2018-19

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

USING INDUSTRY (To)	Agriculture*	Mining & Quarrying	Manufacturing	Construction	Trade and Transportation	Service Industries	Public admin. & Defence	**Intermediate Usage**
SUPPLYING INDUSTRY (From)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	**[8]**
Agriculture*	0.06569855	0.00077010	0.07216365	0.02999228	0.00806141	0.02003883	0.08693681	**0.04467430**
Mining & Quarrying	-	0.00015536	0.04269189	0.00309051	0.00015919	0.00468514	-	**0.01616769**
Manufacturing	0.03962997	0.08519925	0.28757814	0.28093785	0.13231357	0.07823465	0.04488636	**0.17292601**
Construction	0.00067982	0.07664961	0.02496087	-	0.02631217	0.03322590	0.01081530	**0.02229422**
Trade and Transportation	0.00510942	0.10326920	0.01974537	0.00233496	0.10933021	0.07648761	0.06063881	**0.04536132**
Service Industries	0.04973036	0.13415423	0.05783819	0.13047981	0.11317908	0.13630732	0.02894532	**0.09223849**
Public admin. & Defence	-	-	-	-	-	-	-	**-**
Intermediate Inputs	**0.16084812**	**0.40019776**	**0.50497809**	**0.44683541**	**0.38935563**	**0.34897945**	**0.23222259**	**0.39366203**
Production Taxes Less Subsidies	-0.02670716	0.00538363	0.00071544	0.00215125	-0.00298376	0.00573238	-	**-0.00124673**
Consumption of Fixed Capital	0.05255549	0.09859539	0.03581036	0.02421814	0.05913440	0.09068237	0.09799192	**0.05707395**
Compensation of Employees	0.11913275	0.16871256	0.05783057	0.23547360	0.13743214	0.25311007	0.67560211	**0.17010222**
Operating Surplus	0.65178082	0.35677951	0.14178911	0.10238752	0.42989646	0.29630584	-	**0.26807870**
Gross Value Added (GVA)	0.79676190	0.62947109	0.23614547	0.36423051	0.62347925	0.64583066	0.77359403	**0.49400813**
Trade and Transportation Margin	0.02268608	-0.08003597	0.09075258	0.08354433	-0.07159754	-0.04795722	-0.02720507	**0.01851053**
Net Indirect Taxes	0.00637399	0.02136222	0.02661516	0.02632617	0.02108318	0.01805039	0.00868300	**0.02066321**
Import with CIF adj.	0.01332991	0.02900489	0.14150870	0.07906358	0.03767949	0.03509673	0.01270545	**0.07315610**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

USING INDUSTRY (To)	Private Final Consumption Expenditure	Government Final Consumption Expenditure	Gross Fixed Capital Formation	Change in Stock	Valuables	Export	**Total Supply**
SUPPLYING INDUSTRY (From)	[9]	[10]	[11]	[12]	[13]	[14]	**[15]**
Agriculture*	0.18787970	0.00150700	0.00138079	0.07494841	-	0.02316264	**0.06548970**
Mining & Quarrying	0.00008023	-	-	0.06984036	-	0.00235269	**0.01033230**
Manufacturing	0.23916401	0.00201167	0.25255535	0.41702800	0.63971835	0.38636393	**0.20477448**
Construction	0.01364341	0.03121238	0.48095411	0.03824644	-	0.00682709	**0.06393046**
Trade and Transportation	0.21001961	0.00469451	0.00150871	-	-	0.11584748	**0.07582317**
Service Industries	0.32259473	0.26209664	0.08446405	0.00018425	0.00027939	0.30556965	**0.15511183**
Public admin. & Defence	-	0.65861625	-	-	-	0.00112449	**0.02327425**
Intermediate Inputs	**0.97338168**	**0.96013845**	**0.82086300**	**0.60024745**	**0.63999774**	**0.84124797**	**0.59873618**
Production Taxes Less Subsidies	-	-	-	-	-	-	**-**
Consumption of Fixed Capital	-	-	-	-	-	-	**-**
Compensation of Employees	-	-	-	-	-	-	**-**
Operating Surplus	-	-	-	-	-	-	**-**
Gross Value Added (GVA)	-	-	-	-	-	-	**-**
Trade and Transportation Margin	-0.09644438	-	0.06348307	0.15458278	0.17138033	-0.00238812	**-2.60003E-18**
Net Indirect Taxes	0.04541895	0.01646922	0.04595525	0.03278502	0.04224125	0.04804892	**0.02969907**
Import with CIF adj.	0.07764375	0.02339233	0.06969868	0.21238475	0.14638068	0.11309122	**0.07578421**
Indian Production	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**	**1.00000000**

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

ANNEXURE - III

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, OUTPUT MULTIPLIERS

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.169292286	0.081983987	0.251276272	0.298154865	1.251276272	1.549431138
Mining & Quarrying	1.000000000	0.290456944	0.220743153	0.511200097	0.418291042	1.511200097	1.929491139
Manufacturing	1.000000000	0.551729172	0.379898251	0.931627422	0.308976442	1.931627422	2.240603865
Construction	1.000000000	0.432831842	0.332051915	0.764883757	0.677580795	1.764883757	2.442464552
Trade and Transportation	1.000000000	0.328217553	0.225890456	0.554108008	0.406381432	1.554108008	1.960489441
Service Industries	1.000000000	0.324699369	0.209281000	0.533980369	0.649654652	1.533980369	2.183635021
Public admin. & Defence	1.000000000	0.251950186	0.127345504	0.379295690	1.397459530	1.379295690	2.776755220

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.169292286	1.251276272	1.549431138	0.549431138
Mining & Quarrying	1.290456944	1.511200097	1.929491139	0.929491139
Manufacturing	1.551729172	1.931627422	2.240603865	1.240603865
Construction	1.432831842	1.764883757	2.442464552	1.442464552
Trade and Transportation	1.328217553	1.554108008	1.960489441	0.960489441
Service Industries	1.324699369	1.533980369	2.183635021	1.183635021
Public admin. & Defence	1.251950186	1.379295690	2.776755220	1.776755220

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, INCOME MULTIPLIERS

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.115476109	0.023280767	0.010640033	0.033920800	0.043938684	0.149396910	0.193335594
Mining & Quarrying	0.149347048	0.033856514	0.026390163	0.060246677	0.061642992	0.209593726	0.271236718
Manufacturing	0.053551345	0.056146895	0.045121053	0.101267949	0.045533446	0.154819294	0.200352739
Construction	0.248360599	0.051416174	0.039739661	0.091155835	0.099854177	0.339516435	0.439370611
Trade and Transportation	0.119379386	0.054758102	0.029488672	0.084246773	0.059887889	0.203626159	0.263514048
Service Industries	0.242700708	0.054982193	0.027840538	0.082822731	0.095738738	0.325523440	0.421262178
Public admin. & Defence	0.648952746	0.034104020	0.017170396	0.051274416	0.205941744	0.700227162	0.906168907

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.201606786	1.293747345	1.674247559	0.674247559
Mining & Quarrying	1.226696910	1.403400523	1.816150510	0.816150510
Manufacturing	2.048468438	2.891043972	3.741320384	2.741320384
Construction	1.207022266	1.367030180	1.769083392	0.769083392
Trade and Transportation	1.458689756	1.705706203	2.207366421	1.207366421
Service Industries	1.226543192	1.341254593	1.735727023	0.735727023
Public admin. & Defence	1.052552393	1.079011016	1.396355762	0.396355762

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, GVA MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

	Initial Effects	First Round Effects	Industrial Support Effects	Production Induced Effects	Consumptin Induced Effects	Simple Multipliers	Total Multipliers
Product	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Agriculture*	0.778810648	0.103507329	0.040312039	0.143819368	0.162753408	0.922630016	1.085383424
Mining & Quarrying	0.576497773	0.113528137	0.100034908	0.213563045	0.228331986	0.790060818	1.018392804
Manufacturing	0.223936921	0.243994502	0.173398748	0.417393250	0.168660568	0.641330171	0.809990739
Construction	0.372557788	0.166353707	0.152652717	0.319006424	0.369870145	0.691564212	1.061434357
Trade and Transportation	0.623230021	0.154841505	0.104432628	0.259274133	0.221830902	0.882504154	1.104335056
Service Industries	0.628592698	0.165245152	0.097335109	0.262580261	0.354626137	0.891172959	1.245799096
Public admin. & Defence	0.752482024	0.153574636	0.061204524	0.214779160	0.762829411	0.967261184	1.730090595

	Type 1A Multipliers	Type 1B Multipliers	Type 2A Multipliers	Type 2B Multipliers
Product	[8]	[9]	[10]	[11]
Agriculture*	1.132904358	1.184665385	1.393642250	0.393642250
Mining & Quarrying	1.196927279	1.370449037	1.766516458	0.766516458
Manufacturing	2.089567995	2.863887601	3.617048656	2.617048656
Construction	1.446517863	1.856260247	2.849046216	1.849046216
Trade and Transportation	1.248450009	1.416016758	1.771954204	0.771954204
Service Industries	1.262881120	1.417727190	1.981886046	0.981886046
Public admin. & Defence	1.204090770	1.285427629	2.299178637	1.299178637

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, IMPORTS MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

	Initial Effects	First Round Effects	Industrial Support Effects	Production Induced Effects	Consumptin Induced Effects	Simple Multipliers	Total Multipliers
Product	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Agriculture*	0.014127696	0.007947530	0.005823804	0.013771334	0.017321915	0.027899030	0.045220945
Mining & Quarrying	0.072363791	0.027024423	0.017519105	0.044543528	0.024301471	0.116907319	0.141208790
Manufacturing	0.127417247	0.045635289	0.029922761	0.075558049	0.017950616	0.202975297	0.220925913
Construction	0.075810540	0.040427266	0.025911251	0.066338517	0.039365438	0.142149057	0.181514495
Trade and Transportation	0.035955786	0.023517287	0.017334968	0.040852254	0.023609558	0.076808040	0.100417598
Service Industries	0.040565430	0.021063296	0.015911195	0.036974491	0.037743012	0.077539921	0.115282933
Public admin. & Defence	0.013010428	0.011054037	0.009264017	0.020318054	0.081188261	0.033328481	0.114516742

	Type 1A Multipliers	Type 1B Multipliers	Type 2A Multipliers	Type 2B Multipliers
Product	[8]	[9]	[10]	[11]
Agriculture*	1.562549583	1.974775604	3.200871818	2.200871818
Mining & Quarrying	1.373452285	1.615549948	1.951373579	0.951373579
Manufacturing	1.358156290	1.592997031	1.733877616	0.733877616
Construction	1.533267086	1.875056647	2.394317397	1.394317397
Trade and Transportation	1.654061262	2.136180263	2.792807767	1.792807767
Service Industries	1.519242519	1.911477846	2.841900907	1.841900907
Public admin. & Defence	1.849629000	2.561674579	8.801919995	7.801919995

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, TTM MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.03127149	0.00416394	0.00217169	0.00633563	0.00472791	0.03760711	0.04233502
Mining & Quarrying	0.03315567	0.00900458	0.00646597	0.01547055	0.00663293	0.04862622	0.05525915
Manufacturing	0.05092826	0.01866261	0.01124005	0.02990266	0.00489951	0.08083092	0.08573043
Construction	0.07725529	0.01295294	0.00967570	0.02262864	0.01074455	0.09988393	0.11062848
Trade and Transportation	-0.00626478	0.00599504	0.00595146	0.01194650	0.00644408	0.00568172	0.01212580
Service Industries	-0.01027464	0.00506618	0.00538282	0.01044900	0.01030172	0.00017436	0.01047608
Public admin. & Defence	-0.02441098	0.00517107	0.00324354	0.00841461	0.02215982	-0.01599637	0.00616346

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.13315456	1.20260084	1.35378993	0.35378993
Mining & Quarrying	1.27158497	1.46660351	1.66665779	0.66665779
Manufacturing	1.36644901	1.58715259	1.68335669	0.68335669
Construction	1.16766414	1.29290729	1.43198577	0.43198577
Trade and Transportation	0.04305647	-0.90693058	-1.93555120	-2.93555120
Service Industries	0.50692383	-0.01697026	-1.01960582	-2.01960582
Public admin. & Defence	0.78816620	0.65529406	-0.25248712	-1.25248712

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, OUTPUT MULTIPLIERS

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.171522931	0.082979141	0.254502072	0.305130120	1.254502072	1.559632192
Mining & Quarrying	1.000000000	0.335051258	0.245576906	0.580628165	0.403878400	1.580628165	1.984506565
Manufacturing	1.000000000	0.530550412	0.364877736	0.895428148	0.326497472	1.895428148	2.221925620
Construction	1.000000000	0.435967452	0.323963548	0.759931000	0.672274249	1.759931000	2.432205249
Trade and Transportation	1.000000000	0.360425383	0.245915436	0.606340819	0.405422129	1.606340819	2.011762948
Service Industries	1.000000000	0.324521614	0.209487295	0.534008909	0.643871699	1.534008909	2.177880607
Public admin. & Defence	1.000000000	0.251950186	0.130042849	0.381993034	1.404053028	1.381993034	2.786046063

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.171522931	1.254502072	1.559632192	0.559632192
Mining & Quarrying	1.335051258	1.580628165	1.984506565	0.984506565
Manufacturing	1.530550412	1.895428148	2.221925620	1.221925620
Construction	1.435967452	1.759931000	2.432205249	1.432205249
Trade and Transportation	1.360425383	1.606340819	2.011762948	1.011762948
Service Industries	1.324521614	1.534008909	2.177880607	1.177880607
Public admin. & Defence	1.251950186	1.381993034	2.786046063	1.786046063

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, INCOME MULTIPLIERS

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.117297212	0.023970983	0.010957374	0.034928356	0.044780604	0.152225568	0.197006171
Mining & Quarrying	0.133144453	0.038438043	0.029907343	0.068345386	0.059272807	0.201489839	0.260762646
Manufacturing	0.062113118	0.056473915	0.044298438	0.100772352	0.047916456	0.162885470	0.210801926
Construction	0.242384259	0.053256518	0.039748365	0.093004883	0.098662324	0.335389142	0.434051466
Trade and Transportation	0.115405354	0.055017507	0.031837124	0.086854632	0.059499363	0.202259986	0.261759349
Service Industries	0.238773852	0.054447078	0.027998539	0.082445616	0.094493993	0.321219468	0.415713461
Public admin. & Defence	0.648952746	0.034059487	0.017452111	0.051511598	0.206057476	0.700464344	0.906521820

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.204361060	1.297776526	1.679546929	0.679546929
Mining & Quarrying	1.288694290	1.513317563	1.958494252	0.958494252
Manufacturing	1.909210753	2.622400479	3.393839065	2.393839065
Construction	1.219719374	1.383708427	1.790757649	0.790757649
Trade and Transportation	1.476732711	1.752604871	2.268173349	1.268173349
Service Industries	1.228027806	1.345287457	1.741034279	0.741034279
Public admin. & Defence	1.052483771	1.079376500	1.396899582	0.396899582

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, GVA MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.776652036	0.105248001	0.040954595	0.146202596	0.164907893	0.922854632	1.087762526
Mining & Quarrying	0.517608404	0.138215222	0.112339242	0.250554464	0.218276505	0.768162868	0.986439373
Manufacturing	0.259440476	0.235920767	0.167935086	0.403855853	0.176455901	0.663296329	0.839752230
Construction	0.368928061	0.177544538	0.149737701	0.327282239	0.363331323	0.696210301	1.059541624
Trade and Transportation	0.565280653	0.169224740	0.114106944	0.283331684	0.219110815	0.848612337	1.067723152
Service Industries	0.628175120	0.164326882	0.097963879	0.262290761	0.347981135	0.890465881	1.238447016
Public admin. & Defence	0.752482024	0.150389133	0.062802437	0.213191570	0.758821932	0.965673594	1.724495526

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.135515000	1.188247232	1.400578991	0.400578991
Mining & Quarrying	1.267026618	1.484061816	1.905763828	0.905763828
Manufacturing	1.909344491	2.556641660	3.236781876	2.236781876
Construction	1.481244332	1.887116686	2.871946417	1.871946417
Trade and Transportation	1.299364111	1.501223034	1.888837246	0.888837246
Service Industries	1.261594063	1.417544013	1.971499628	0.971499628
Public admin. & Defence	1.199857443	1.283317824	2.291743152	1.291743152

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, IMPORTS MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.014507804	0.007928779	0.005830127	0.013758906	0.018101033	0.028266709	0.046367742
Mining & Quarrying	0.081115636	0.029492740	0.019163361	0.048656101	0.023959012	0.129771737	0.153730749
Manufacturing	0.119483269	0.043249157	0.028279570	0.071528727	0.019368594	0.191011996	0.210380590
Construction	0.077211918	0.038488834	0.024951578	0.063440412	0.039880882	0.140652330	0.180533212
Trade and Transportation	0.049506698	0.026373264	0.018742891	0.045116155	0.024050590	0.094622854	0.118673443
Service Industries	0.040566929	0.021214067	0.015759309	0.036973376	0.038195976	0.077540305	0.115736281
Public admin. & Defence	0.013010428	0.011806125	0.009379879	0.021186004	0.083291712	0.034196431	0.117488143

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.546518216	1.948379639	3.196055264	2.196055264
Mining & Quarrying	1.363588835	1.599836274	1.895204876	0.895204876
Manufacturing	1.361968310	1.598650572	1.760753555	0.760753555
Construction	1.498483075	1.821640154	2.338152153	1.338152153
Trade and Transportation	1.532721130	1.911314167	2.397118927	1.397118927
Service Industries	1.522939933	1.911416676	2.852971211	1.852971211
Public admin. & Defence	1.907435587	2.628386433	9.030306094	8.030306094

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, TTM MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.03067676	0.00402556	0.00213073	0.00615629	0.00511314	0.03683306	0.04194619
Mining & Quarrying	0.03569284	0.01023860	0.00699892	0.01723752	0.00676788	0.05293036	0.05969824
Manufacturing	0.04681565	0.01722288	0.01044468	0.02766756	0.00547119	0.07448321	0.07995441
Construction	0.07627854	0.01208696	0.00913411	0.02122107	0.01126546	0.09749961	0.10876506
Trade and Transportation	0.00205494	0.00771509	0.00650301	0.01421810	0.00679375	0.01627304	0.02306679
Service Industries	-0.00976178	0.00523523	0.00530887	0.01054410	0.01078951	0.00078232	0.01157183
Public admin. & Defence	-0.02441098	0.00556969	0.00329150	0.00886119	0.02352804	-0.01554979	0.00797826

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.13122515	1.20068259	1.36736042	0.36736042
Mining & Quarrying	1.28685321	1.48294064	1.67255528	0.67255528
Manufacturing	1.36788735	1.59098969	1.70785647	0.70785647
Construction	1.15845821	1.27820498	1.42589339	0.42589339
Trade and Transportation	4.75441387	7.91899027	11.22505100	10.22505100
Service Industries	0.46370141	-0.08014120	-1.18542226	-2.18542226
Public admin. & Defence	0.77183648	0.63699976	-0.32683076	-1.32683076

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, OUTPUT MULTIPLIERS

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION

(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.171389261	0.082647128	0.254036389	0.303284065	1.254036389	1.557320454
Mining & Quarrying	1.000000000	0.306734316	0.229578054	0.536312370	0.442349431	1.536312370	1.978661801
Manufacturing	1.000000000	0.518807997	0.353603543	0.872411540	0.316161576	1.872411540	2.188573116
Construction	1.000000000	0.436195913	0.326812465	0.763008377	0.681829142	1.763008377	2.444837520
Trade and Transportation	1.000000000	0.342377790	0.232582720	0.574960510	0.437540510	1.574960510	2.012501020
Service Industries	1.000000000	0.325099324	0.208376684	0.533476008	0.652196800	1.533476008	2.185672809
Public admin. & Defence	1.000000000	0.251950147	0.127809617	0.379759764	1.401053987	1.379759764	2.780813751

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.171389261	1.254036389	1.557320454	0.557320454
Mining & Quarrying	1.306734316	1.536312370	1.978661801	0.978661801
Manufacturing	1.518807997	1.872411540	2.188573116	1.188573116
Construction	1.436195913	1.763008377	2.444837520	1.444837520
Trade and Transportation	1.342377790	1.574960510	2.012501020	1.012501020
Service Industries	1.325099324	1.533476008	2.185672809	1.185672809
Public admin. & Defence	1.251950147	1.379759764	2.780813751	1.780813751

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, INCOME MULTIPLIERS

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION

(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.117210156	0.023678110	0.010810335	0.034488445	0.045044130	0.151698602	0.196742732
Mining & Quarrying	0.157716622	0.035857877	0.027682724	0.063540602	0.065698293	0.221257223	0.286955517
Manufacturing	0.060738424	0.054849730	0.042551605	0.097401334	0.046956714	0.158139759	0.205096473
Construction	0.250291029	0.051306518	0.039444200	0.090750718	0.101266121	0.341041747	0.442307868
Trade and Transportation	0.130920725	0.057286414	0.030644727	0.087931141	0.064984066	0.218851866	0.283835932
Service Industries	0.242948471	0.055327766	0.027943812	0.083271578	0.096865088	0.326220049	0.423085137
Public admin. & Defence	0.648952779	0.034475335	0.017360207	0.051835542	0.208086299	0.700788321	0.908874619

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.202014152	1.294244512	1.678546793	0.678546793
Mining & Quarrying	1.227356360	1.402878281	1.819437377	0.819437377
Manufacturing	1.903048279	2.603619705	3.376717046	2.376717046
Construction	1.204987442	1.362580786	1.767174276	0.767174276
Trade and Transportation	1.437565664	1.671636528	2.167998478	1.167998478
Service Industries	1.227734573	1.342754075	1.741460385	0.741460385
Public admin. & Defence	1.053124566	1.079875677	1.400525045	0.400525045

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, GVA MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.776077808	0.104100420	0.040777350	0.144877770	0.166927481	0.920955578	1.087883059
Mining & Quarrying	0.608805345	0.120238704	0.104668985	0.224907689	0.243469028	0.833713034	1.077182061
Manufacturing	0.253698515	0.231385827	0.162378152	0.393763979	0.174015260	0.647462494	0.821477754
Construction	0.375453564	0.165372639	0.151304906	0.316677545	0.375278607	0.692131110	1.067409717
Trade and Transportation	0.650735894	0.162593388	0.108169937	0.270763326	0.240822199	0.921499219	1.162321418
Service Industries	0.629362275	0.166571348	0.097439874	0.264011222	0.358968973	0.893373498	1.252342470
Public admin. & Defence	0.752482062	0.155326855	0.061644334	0.216971189	0.771139800	0.969453251	1.740593051

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.134136577	1.186679440	1.401770607	0.401770607
Mining & Quarrying	1.197499422	1.369424630	1.769337393	0.769337393
Manufacturing	1.912050383	2.552094146	3.238007742	2.238007742
Construction	1.440460965	1.843453293	2.842987304	1.842987304
Trade and Transportation	1.249860796	1.416087891	1.786164601	0.786164601
Service Industries	1.264666878	1.419490066	1.989859448	0.989859448
Public admin. & Defence	1.206419346	1.288340680	2.313135608	1.313135608

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, IMPORTS MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.014704119	0.008486498	0.005890009	0.014376507	0.016865771	0.029080626	0.045946397
Mining & Quarrying	0.044535022	0.029183939	0.018221708	0.047405647	0.024599262	0.091940669	0.116539931
Manufacturing	0.129430887	0.042653273	0.027897321	0.070550595	0.017581895	0.199981481	0.217563376
Construction	0.071977684	0.044170663	0.025401291	0.069571953	0.037916842	0.141549637	0.179466479
Trade and Transportation	0.013355316	0.024612269	0.017853173	0.042465442	0.024331835	0.055820758	0.080152594
Service Industries	0.039811380	0.020558555	0.015855704	0.036414259	0.036268973	0.076225640	0.112494613
Public admin. & Defence	0.013010424	0.009734747	0.009377576	0.019112322	0.077913277	0.032122746	0.110036023

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.577151058	1.977719707	3.124729637	2.124729637
Mining & Quarrying	1.655303120	2.064457681	2.616815361	1.616815361
Manufacturing	1.329544780	1.545083143	1.680923169	0.680923169
Construction	1.613671627	1.966576714	2.493362793	1.493362793
Trade and Transportation	2.842881749	4.179665760	6.001549616	5.001549616
Service Industries	1.516398958	1.914669603	2.825689846	1.825689846
Public admin. & Defence	1.748226690	2.469000706	8.457527776	7.457527776

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, TTM MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.03109816	0.00435584	0.00218354	0.00653938	0.00443564	0.03763753	0.04207317
Mining & Quarrying	0.02252099	0.00976710	0.00668963	0.01645673	0.00646952	0.03897772	0.04544724
Manufacturing	0.05071330	0.01707028	0.01038745	0.02745773	0.00462398	0.07817102	0.08279500
Construction	0.07612311	0.01448734	0.00944057	0.02392791	0.00997200	0.10005102	0.11002302
Trade and Transportation	-0.01739562	0.00626742	0.00608918	0.01235660	0.00639919	-0.00503902	0.00136017
Service Industries	-0.01028026	0.00483701	0.00533291	0.01016992	0.00953861	-0.00011034	0.00942828
Public admin. & Defence	-0.02441097	0.00455608	0.00327039	0.00782647	0.02049092	-0.01658450	0.00390642

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.14006736	1.21028180	1.35291530	0.35291530
Mining & Quarrying	1.43368898	1.73072883	2.01799513	1.01799513
Manufacturing	1.33660355	1.54143049	1.63260929	0.63260929
Construction	1.19031467	1.31433177	1.44533006	0.44533006
Trade and Transportation	0.63971274	0.28967173	-0.07819037	-1.07819037
Service Industries	0.52948543	0.01073294	-0.91712444	-1.91712444
Public admin. & Defence	0.81335926	0.67938726	-0.16002723	-1.16002723

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, OUTPUT MULTIPLIERS

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.171406741	0.082663815	0.254070556	0.304677710	1.254070556	1.558748266
Mining & Quarrying	1.000000000	0.297816427	0.223062841	0.520879268	0.431970513	1.520879268	1.952849781
Manufacturing	1.000000000	0.527033683	0.361239269	0.888272953	0.324307415	1.888272953	2.212580368
Construction	1.000000000	0.435551727	0.322781870	0.758333597	0.687145987	1.758333597	2.445479584
Trade and Transportation	1.000000000	0.329879596	0.223957806	0.553837402	0.422406012	1.553837402	1.976243414
Service Industries	1.000000000	0.325164752	0.209411719	0.534576471	0.652716719	1.534576471	2.187293190
Public admin. & Defence	1.000000000	0.251950186	0.129876628	0.381826813	1.403048401	1.381826813	2.784875215

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.171406741	1.254070556	1.558748266	0.558748266
Mining & Quarrying	1.297816427	1.520879268	1.952849781	0.952849781
Manufacturing	1.527033683	1.888272953	2.212580368	1.212580368
Construction	1.435551727	1.758333597	2.445479584	1.445479584
Trade and Transportation	1.329879596	1.553837402	1.976243414	0.976243414
Service Industries	1.325164752	1.534576471	2.187293190	1.187293190
Public admin. & Defence	1.251950186	1.381826813	2.784875215	1.784875215

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, INCOME MULTIPLIERS

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.117222079	0.023959085	0.010943531	0.034902616	0.044794388	0.152124695	0.196919083
Mining & Quarrying	0.153131144	0.035272186	0.027278291	0.062550477	0.063509257	0.215681621	0.279190878
Manufacturing	0.061701404	0.056243165	0.043981180	0.100224346	0.047680391	0.161925750	0.209606140
Construction	0.249921280	0.053429545	0.039739169	0.093168713	0.101025717	0.343089993	0.444115711
Trade and Transportation	0.126141532	0.055123599	0.029640963	0.084764562	0.062103063	0.210906094	0.273009156
Service Industries	0.242997267	0.054811361	0.028090932	0.082902293	0.095963850	0.325899560	0.421863410
Public admin. & Defence	0.648952746	0.034111937	0.017473304	0.051585241	0.206279268	0.700537987	0.906817255

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.204390553	1.297747802	1.679880493	0.679880493
Mining & Quarrying	1.230339729	1.408476520	1.823214207	0.823214207
Manufacturing	1.911537852	2.624344650	3.397104874	2.397104874
Construction	1.213785495	1.372792239	1.777022391	0.777022391
Trade and Transportation	1.436998016	1.671979804	2.164308236	1.164308236
Service Industries	1.225563691	1.341165535	1.736082941	0.736082941
Public admin. & Defence	1.052564593	1.079489980	1.397354831	0.397354831

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, GVA MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.776156748	0.105146571	0.040860391	0.146006962	0.164877677	0.922163710	1.087041387
Mining & Quarrying	0.591104844	0.119111320	0.101976733	0.221088053	0.233762734	0.812192897	1.045955632
Manufacturing	0.257720787	0.234840368	0.166522551	0.401362919	0.175500378	0.659083706	0.834584083
Construction	0.374898916	0.176405150	0.149502531	0.325907682	0.371852059	0.700806597	1.072658656
Trade and Transportation	0.626981118	0.157536533	0.104352339	0.261888872	0.228586863	0.888869990	1.117456853
Service Industries	0.629488684	0.165162543	0.098092495	0.263255038	0.353220510	0.892743722	1.245964232
Public admin. & Defence	0.752482024	0.150540322	0.062798667	0.213338989	0.759265784	0.965821013	1.725086798

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.135470794	1.188115304	1.400543627	0.400543627
Mining & Quarrying	1.201506250	1.374025108	1.769492573	0.769492573
Manufacturing	1.911220126	2.557355633	3.238326616	2.238326616
Construction	1.470540573	1.869321484	2.861194343	1.861194343
Trade and Transportation	1.251262005	1.417698181	1.782281509	0.782281509
Service Industries	1.262375714	1.418204559	1.979327450	0.979327450
Public admin. & Defence	1.200058363	1.283513735	2.292528915	1.292528915

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, IMPORTS MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.015059481	0.008003327	0.005806883	0.013810209	0.017978725	0.028869690	0.046848415
Mining & Quarrying	0.060416106	0.027080328	0.017452026	0.044532353	0.025490145	0.104948460	0.130438605
Manufacturing	0.122625337	0.042985381	0.028016685	0.071002066	0.019137054	0.193627402	0.212764457
Construction	0.073839021	0.039232437	0.024836412	0.064068849	0.040547793	0.137907870	0.178455663
Trade and Transportation	0.032481080	0.023278084	0.016971970	0.040250054	0.024925754	0.072731133	0.097656887
Service Industries	0.039378518	0.021027838	0.015741387	0.036769225	0.038516157	0.076147743	0.114663900
Public admin. & Defence	0.013010428	0.011710611	0.009378192	0.021088803	0.082792475	0.034099231	0.116891705

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.531447700	1.917044157	3.110891746	2.110891746
Mining & Quarrying	1.448230268	1.737094064	2.159003832	1.159003832
Manufacturing	1.350542409	1.579016275	1.735077451	0.735077451
Construction	1.531323909	1.867682817	2.416820562	1.416820562
Trade and Transportation	1.716665943	2.239184597	3.006577617	2.006577617
Service Industries	1.533992619	1.933738168	2.911838891	1.911838891
Public admin. & Defence	1.900094233	2.620915456	8.984463021	7.984463021

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2016-17, TTM MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.03051370	0.00403070	0.00211312	0.00614382	0.00514428	0.03665752	0.04180180
Mining & Quarrying	0.02768147	0.00881248	0.00630673	0.01511921	0.00729353	0.04280068	0.05009421
Manufacturing	0.04726689	0.01697589	0.01027928	0.02725517	0.00547571	0.07452206	0.07999777
Construction	0.07524620	0.01214039	0.00903538	0.02117577	0.01160200	0.09642197	0.10802397
Trade and Transportation	-0.00594594	0.00599327	0.00574467	0.01173794	0.00713204	0.00579200	0.01292404
Service Industries	-0.00997192	0.00520185	0.00527862	0.01048047	0.01102068	0.00050855	0.01152923
Public admin. & Defence	-0.02441098	0.00558550	0.00327795	0.00886346	0.02368952	-0.01554752	0.00814200

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.13209458	1.20134609	1.36993517	0.36993517
Mining & Quarrying	1.31835286	1.54618512	1.80966568	0.80966568
Manufacturing	1.35914965	1.57662278	1.69246943	0.69246943
Construction	1.16134229	1.28141981	1.43560695	0.43560695
Trade and Transportation	-0.00796078	-0.97411091	-2.17359231	-3.17359231
Service Industries	0.47834994	-0.05099815	-1.15616992	-2.15616992
Public admin. & Defence	0.77118887	0.63690693	-0.33353869	-1.33353869

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, OUTPUT MULTIPLIERS

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.153626482	0.073599784	0.227226266	0.303714579	1.227226266	1.530940845
Mining & Quarrying	1.000000000	0.450222589	0.293837833	0.744060422	0.599796688	1.744060422	2.343857110
Manufacturing	1.000000000	0.494690676	0.339346132	0.834036809	0.299792649	1.834036809	2.133829457
Construction	1.000000000	0.448493356	0.308306809	0.756800165	0.691557838	1.756800165	2.448358003
Trade and Transportation	1.000000000	0.354838437	0.237919702	0.592758139	0.438163836	1.592758139	2.030921975
Service Industries	1.000000000	0.330757733	0.202689498	0.533447231	0.674777601	1.533447231	2.208224832
Public admin. & Defence	1.000000000	0.233083185	0.114532378	0.347615563	1.436408286	1.347615563	2.784023850

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.153626482	1.227226266	1.530940845	0.530940845
Mining & Quarrying	1.450222589	1.744060422	2.343857110	1.343857110
Manufacturing	1.494690676	1.834036809	2.133829457	1.133829457
Construction	1.448493356	1.756800165	2.448358003	1.448358003
Trade and Transportation	1.354838437	1.592758139	2.030921975	1.030921975
Service Industries	1.330757733	1.533447231	2.208224832	1.208224832
Public admin. & Defence	1.233083185	1.347615563	2.784023850	1.784023850

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, INCOME MULTIPLIERS

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.119991891	0.021500572	0.010094917	0.031595489	0.045619882	0.151587380	0.197207262
Mining & Quarrying	0.181623616	0.077051013	0.040690679	0.117741692	0.090093317	0.299365309	0.389458626
Manufacturing	0.052256820	0.053987099	0.043385982	0.097373081	0.045030782	0.149629901	0.194660683
Construction	0.244970510	0.059609914	0.040583912	0.100193826	0.103876432	0.345164337	0.449040768
Trade and Transportation	0.134960608	0.051579628	0.032152289	0.083731917	0.065815024	0.218692525	0.284507549
Service Industries	0.249225048	0.058571770	0.028992311	0.087564082	0.101355932	0.336789130	0.438145062
Public admin. & Defence	0.670437768	0.030910522	0.015579327	0.046489849	0.215757756	0.716927617	0.932685373

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.179183544	1.263313533	1.643504903	0.643504903
Mining & Quarrying	1.424234551	1.648273031	2.144317097	1.144317097
Manufacturing	2.033111065	2.863356409	3.725077089	2.725077089
Construction	1.243335062	1.409003622	1.833040097	0.833040097
Trade and Transportation	1.382182834	1.620417456	2.108078450	1.108078450
Service Industries	1.235015585	1.351345430	1.758029801	0.758029801
Public admin. & Defence	1.046104984	1.069342527	1.391158759	0.391158759

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, GVA MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.801363805	0.093363462	0.036237146	0.129600608	0.168219425	0.930964413	1.099183838
Mining & Quarrying	0.615169149	0.230504305	0.137172909	0.367677214	0.332211429	0.982846363	1.315057792
Manufacturing	0.225757510	0.208559631	0.155249521	0.363809152	0.166047173	0.589566662	0.755613835
Construction	0.368624825	0.189116184	0.143309548	0.332425732	0.383035489	0.701050556	1.084086046
Trade and Transportation	0.627383014	0.168376643	0.110922252	0.279298896	0.242687292	0.906681909	1.149369202
Service Industries	0.652776966	0.181599464	0.097464609	0.279064073	0.373741362	0.931841039	1.305582401
Public admin. & Defence	0.770187432	0.144594451	0.055304597	0.199899048	0.795588337	0.970086480	1.765674817

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.116505713	1.161725058	1.371641483	0.371641483
Mining & Quarrying	1.374700690	1.597684741	2.137717396	1.137717396
Manufacturing	1.923821454	2.611504096	3.347015277	2.347015277
Construction	1.513031602	1.901799634	2.940892673	1.940892673
Trade and Transportation	1.268379347	1.445180838	1.832005611	0.832005611
Service Industries	1.278195270	1.427502942	2.000043613	1.000043613
Public admin. & Defence	1.187739303	1.259545975	2.292526136	1.292526136

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, IMPORTS MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.013476212	0.008062958	0.005437630	0.013500588	0.018447292	0.026976800	0.045424092
Mining & Quarrying	0.031257198	0.028743184	0.023272694	0.052015878	0.036430996	0.083273076	0.119704072
Manufacturing	0.137411976	0.044398502	0.027570404	0.071968906	0.018209078	0.209380881	0.227589960
Construction	0.075823900	0.041201897	0.024499863	0.065701760	0.042004468	0.141525659	0.183530128
Trade and Transportation	0.040746560	0.027338647	0.018829078	0.046167725	0.026613593	0.086914284	0.113527878
Service Industries	0.037310894	0.019515068	0.015338275	0.034853343	0.040985255	0.072164237	0.113149492
Public admin. & Defence	0.012926033	0.010982162	0.008718620	0.019700782	0.087245872	0.032626814	0.119872686

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.598310390	2.001808777	3.370686910	2.370686910
Mining & Quarrying	1.919570078	2.664124813	3.829648246	2.829648246
Manufacturing	1.323105042	1.523745512	1.656260006	0.656260006
Construction	1.543389316	1.866504621	2.420478613	1.420478613
Trade and Transportation	1.670943692	2.133045963	2.786195419	1.786195419
Service Industries	1.523039408	1.934133141	3.032612711	2.032612711
Public admin. & Defence	1.849615785	2.524116632	9.273741442	8.273741442

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, TTM MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02539671	0.00424763	0.00228666	0.00653429	0.00359091	0.03193100	0.03552191
Mining & Quarrying	-0.12137716	0.00406427	0.00929342	0.01335769	0.00709159	-0.10801947	-0.10092789
Manufacturing	0.11336536	0.02616824	0.01344994	0.03961818	0.00354454	0.15298354	0.15652808
Construction	0.07812439	0.02188226	0.01101046	0.03289272	0.00817651	0.11101711	0.11919361
Trade and Transportation	-0.04429082	0.00782677	0.00785152	0.01567829	0.00518055	-0.02861253	-0.02343198
Service Industries	-0.03868567	-0.00024190	0.00550979	0.00526789	0.00797811	-0.03341778	-0.02543967
Public admin. & Defence	-0.02500349	0.00342367	0.00366960	0.00709327	0.01698311	-0.01791022	-0.00092711

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.16725107	1.25728890	1.39868175	0.39868175
Mining & Quarrying	0.96651540	0.88994894	0.83152291	-0.16847709
Manufacturing	1.23083101	1.34947339	1.38073994	0.38073994
Construction	1.28009508	1.42103008	1.52569018	0.52569018
Trade and Transportation	0.82328676	0.64601488	0.52904823	-0.47095177
Service Industries	1.00625303	0.86382848	0.65759944	-0.34240056
Public admin. & Defence	0.86307227	0.71630869	0.03707928	-0.96292072

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, OUTPUT MULTIPLIERS

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.156112110	0.075036847	0.231148956	0.310306631	1.231148956	1.541455587
Mining & Quarrying	1.000000000	0.456193213	0.302178729	0.758371942	0.551002447	1.758371942	2.309374388
Manufacturing	1.000000000	0.484747543	0.327939591	0.812687134	0.318047555	1.812687134	2.130734689
Construction	1.000000000	0.449326948	0.303858091	0.753185039	0.687383253	1.753185039	2.440568293
Trade and Transportation	1.000000000	0.372310684	0.249429322	0.621740007	0.430726766	1.621740007	2.052466772
Service Industries	1.000000000	0.330575929	0.203957013	0.534532942	0.667518212	1.534532942	2.202051154
Public admin. & Defence	1.000000000	0.233083185	0.116089575	0.349172760	1.440344409	1.349172760	2.789517169

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.156112110	1.231148956	1.541455587	0.541455587
Mining & Quarrying	1.456193213	1.758371942	2.309374388	1.309374388
Manufacturing	1.484747543	1.812687134	2.130734689	1.130734689
Construction	1.449326948	1.753185039	2.440568293	1.440568293
Trade and Transportation	1.372310684	1.621740007	2.052466772	1.052466772
Service Industries	1.330575929	1.534532942	2.202051154	1.202051154
Public admin. & Defence	1.233083185	1.349172760	2.789517169	1.789517169

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, INCOME MULTIPLIERS

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.121805380	0.022278509	0.010404135	0.032682644	0.046394783	0.154488024	0.200882807
Mining & Quarrying	0.160734985	0.072260964	0.041323935	0.113584899	0.082381864	0.274319885	0.356701749
Manufacturing	0.060824176	0.054986150	0.042531564	0.097517714	0.047552149	0.158341890	0.205894039
Construction	0.240726434	0.060984424	0.040507032	0.101491456	0.102772527	0.342217890	0.444990418
Trade and Transportation	0.128489467	0.052325055	0.033625390	0.085950446	0.064399122	0.214439913	0.278839035
Service Industries	0.245770274	0.057533487	0.029024199	0.086557686	0.099802451	0.332327960	0.432130411
Public admin. & Defence	0.670437768	0.030818171	0.015828195	0.046646367	0.215349784	0.717084134	0.932433918

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.182902501	1.268318556	1.649211277	0.649211277
Mining & Quarrying	1.449565872	1.706659469	2.219191723	1.219191723
Manufacturing	1.904017994	2.603272245	3.385069093	2.385069093
Construction	1.253334970	1.421604948	1.848531586	0.848531586
Trade and Transportation	1.407232255	1.668929895	2.170131463	1.170131463
Service Industries	1.234094570	1.352189403	1.758269642	0.758269642
Public admin. & Defence	1.045967236	1.069575983	1.390783699	0.390783699

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, GVA MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.799278732	0.095376156	0.037143807	0.132519962	0.170188182	0.931798694	1.101986876
Mining & Quarrying	0.553286161	0.221639805	0.141366127	0.363005931	0.302198198	0.916292092	1.218490290
Manufacturing	0.257293041	0.209788750	0.151733022	0.361521772	0.174433704	0.618814812	0.793248517
Construction	0.366063671	0.196945003	0.142549634	0.339494638	0.376996475	0.705558309	1.082554784
Trade and Transportation	0.576103026	0.173878449	0.116726140	0.290604589	0.236232803	0.866707615	1.102940418
Service Industries	0.652085113	0.178376856	0.098007744	0.276384600	0.366101460	0.928469713	1.294571174
Public admin. & Defence	0.770187432	0.141974874	0.056284610	0.198259485	0.789959259	0.968446917	1.758406176

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.119327779	1.165799435	1.378726634	0.378726634
Mining & Quarrying	1.400588014	1.656090748	2.202278633	1.202278633
Manufacturing	1.815368924	2.405097358	3.083054694	2.083054694
Construction	1.538007509	1.927419641	2.957285496	1.957285496
Trade and Transportation	1.301818323	1.504431631	1.914484680	0.914484680
Service Industries	1.273548426	1.423847432	1.985279449	0.985279449
Public admin. & Defence	1.184338083	1.257417191	2.283088639	1.283088639

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, IMPORTS MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.013810677	0.008014551	0.005493768	0.013508319	0.019235397	0.027318996	0.046554393
Mining & Quarrying	0.048240749	0.032375277	0.023850697	0.056225973	0.034155734	0.104466722	0.138622457
Manufacturing	0.129475479	0.042218452	0.026259953	0.068478405	0.019715244	0.197953884	0.217669128
Construction	0.077059795	0.039375794	0.023847678	0.063223473	0.042609756	0.140283268	0.182893024
Trade and Transportation	0.053133269	0.029331614	0.019643736	0.048975350	0.026700043	0.102108619	0.128808662
Service Industries	0.037490232	0.020277832	0.015455991	0.035733823	0.041378355	0.073224055	0.114602410
Public admin. & Defence	0.012926033	0.011594555	0.008777296	0.020371851	0.089284578	0.033297884	0.122582462

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.580315575	1.978106946	3.370898717	2.370898717
Mining & Quarrying	1.671118859	2.165528605	2.873555218	1.873555218
Manufacturing	1.326072953	1.528890920	1.681161020	0.681161020
Construction	1.510977146	1.820446932	2.373390990	1.373390990
Trade and Transportation	1.552038573	1.921745472	2.424256300	1.424256300
Service Industries	1.540883085	1.953150238	3.056860531	2.056860531
Public admin. & Defence	1.896992531	2.576032745	9.483378508	8.483378508

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, TTM MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02449746	0.00376228	0.00223966	0.00600194	0.01605499	0.03049940	0.04655439
Mining & Quarrying	-0.08305574	0.00954450	0.00986021	0.01940470	0.20227349	-0.06365103	0.13862246
Manufacturing	0.10024330	0.02367044	0.01238618	0.03605662	0.08136920	0.13629993	0.21766913
Construction	0.07863221	0.01892381	0.01043698	0.02936080	0.07490001	0.10799301	0.18289302
Trade and Transportation	-0.02372360	0.01007561	0.00833035	0.01840596	0.13412630	-0.00531764	0.12880866
Service Industries	-0.03801558	0.00111578	0.00569776	0.00681354	0.14580445	-0.03120204	0.11460241
Public admin. & Defence	-0.02500349	0.00430287	0.00367550	0.00797837	0.13960759	-0.01702512	0.12258246

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.15357821	1.24500258	1.90037618	0.90037618
Mining & Quarrying	0.88508324	0.76636527	-1.66902923	-2.66902923
Manufacturing	1.23612988	1.35969108	2.17140814	1.17140814
Construction	1.24066236	1.37339403	2.32593004	1.32593004
Trade and Transportation	0.57529170	0.22414970	-5.42955806	-6.42955806
Service Industries	0.97064934	0.82076978	-3.01461703	-4.01461703
Public admin. & Defence	0.82790932	0.68090984	-4.90261335	-5.90261335

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, OUTPUT MULTIPLIERS

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION

(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.156013058	0.074438489	0.230451547	0.310015209	1.230451547	1.540466756
Mining & Quarrying	1.000000000	0.478377280	0.314997709	0.793374989	0.644224499	1.793374989	2.437599488
Manufacturing	1.000000000	0.473598009	0.320404679	0.794002688	0.310142477	1.794002688	2.104145165
Construction	1.000000000	0.451492003	0.303823891	0.755315894	0.697502140	1.755315894	2.452818034
Trade and Transportation	1.000000000	0.370890706	0.247196649	0.618087355	0.471959184	1.618087355	2.090046539
Service Industries	1.000000000	0.330981035	0.203810868	0.534791903	0.679843527	1.534791903	2.214635430
Public admin. & Defence	1.000000000	0.233083185	0.115404687	0.348487872	1.444540063	1.348487872	2.793027935

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.156013058	1.230451547	1.540466756	0.540466756
Mining & Quarrying	1.478377280	1.793374989	2.437599488	1.437599488
Manufacturing	1.473598009	1.794002688	2.104145165	1.104145165
Construction	1.451492003	1.755315894	2.452818034	1.452818034
Trade and Transportation	1.370890706	1.618087355	2.090046539	1.090046539
Service Industries	1.330981035	1.534791903	2.214635430	1.214635430
Public admin. & Defence	1.233083185	1.348487872	2.793027935	1.793027935

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, INCOME MULTIPLIERS

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION

(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.121728096	0.021964205	0.010309661	0.032273865	0.046991901	0.154001961	0.200993862
Mining & Quarrying	0.192981458	0.083089551	0.043951471	0.127041021	0.097651126	0.320022479	0.417673605
Manufacturing	0.059418496	0.053125818	0.041520868	0.094646686	0.047011193	0.154065182	0.201076374
Construction	0.246608395	0.059520918	0.040359162	0.099880080	0.105726915	0.346488475	0.452215390
Trade and Transportation	0.145898723	0.054765441	0.033784461	0.088549902	0.071539263	0.234448626	0.305987888
Service Industries	0.249172452	0.059133137	0.029410861	0.088543998	0.103050234	0.337716450	0.440766685
Public admin. & Defence	0.670437768	0.031325758	0.015820629	0.047146387	0.218962432	0.717584155	0.936546587

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.180436607	1.265130781	1.651170678	0.651170678
Mining & Quarrying	1.430557172	1.658306880	2.164319875	1.164319875
Manufacturing	1.894095642	2.592882572	3.384070435	2.384070435
Construction	1.241358037	1.405014924	1.833738835	0.833738835
Trade and Transportation	1.375366145	1.606927189	2.097262271	1.097262271
Service Industries	1.237318118	1.355352278	1.768922212	0.768922212
Public admin. & Defence	1.046724334	1.070321795	1.396918002	0.396918002

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, GVA MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.798771595	0.094344817	0.036852389	0.131197206	0.173384119	0.929968801	1.103352920
Mining & Quarrying	0.653638781	0.249981723	0.147957331	0.397939053	0.360299410	1.051577834	1.411877244
Manufacturing	0.251359758	0.201648205	0.147663919	0.349312124	0.173455296	0.600671881	0.774127178
Construction	0.371089467	0.188250516	0.142161737	0.330412253	0.390096325	0.701501720	1.091598045
Trade and Transportation	0.658426161	0.178911049	0.116199955	0.295111004	0.263955525	0.953537165	1.217492690
Service Industries	0.653070823	0.183880072	0.098764203	0.282644275	0.380220283	0.935715098	1.315935381
Public admin. & Defence	0.770187432	0.146418897	0.056033413	0.202452310	0.807896833	0.972639742	1.780536575

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.118112383	1.164248712	1.381312163	0.381312163
Mining & Quarrying	1.382446284	1.608805758	2.160026738	1.160026738
Manufacturing	1.802229467	2.389689928	3.079757813	2.079757813
Construction	1.507291455	1.890384346	2.941603416	1.941603416
Trade and Transportation	1.271725304	1.448206681	1.849095254	0.849095254
Service Industries	1.281562222	1.432792685	2.014996438	1.014996438
Public admin. & Defence	1.190108137	1.262861093	2.311822424	1.311822424

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, IMPORTS MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.013998349	0.008512626	0.005483609	0.013996235	0.017983564	0.027994584	0.045978148
Mining & Quarrying	0.001824600	0.027271966	0.024924600	0.052196566	0.037370594	0.054021166	0.091391760
Manufacturing	0.138047779	0.042911419	0.026051007	0.068962426	0.017990947	0.207010205	0.225001151
Construction	0.072974518	0.044087593	0.024107060	0.068194652	0.040461158	0.141169170	0.181630329
Trade and Transportation	0.019715390	0.027565966	0.019441290	0.047007255	0.027377716	0.066722645	0.094100361
Service Industries	0.036564919	0.018194757	0.015240871	0.033435628	0.039436806	0.070000548	0.109437354
Public admin. & Defence	0.012926033	0.009862768	0.008779415	0.018642183	0.083795821	0.031568216	0.115364037

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.608116449	1.999849044	3.284540881	2.284540881
Mining & Quarrying	15.94682227	29.60713437	50.08866584	49.08866584
Manufacturing	1.310844692	1.499554768	1.629878826	0.629878826
Construction	1.604150513	1.934499520	2.488955505	1.488955505
Trade and Transportation	2.398195315	3.384292479	4.772939424	3.772939424
Service Industries	1.497601464	1.914418226	2.992960363	1.992960363
Public admin. & Defence	1.763015849	2.442220026	8.924937642	7.924937642

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, TTM MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02483036	0.00445925	0.00222077	0.00668002	0.00264664	0.03151038	0.03415702
Mining & Quarrying	-0.15326936	0.00079433	0.00964497	0.01043930	0.00549984	-0.14283006	-0.13733022
Manufacturing	0.10688471	0.02437977	0.01228196	0.03666173	0.00264773	0.14354645	0.14619418
Construction	0.07604926	0.02438480	0.01051100	0.03489580	0.00595468	0.11094506	0.11689973
Trade and Transportation	-0.06672537	0.00683811	0.00776346	0.01460157	0.00402918	-0.05212381	-0.04809462
Service Industries	-0.03806211	-0.00164045	0.00518226	0.00354181	0.00580392	-0.03452030	-0.02871638
Public admin. & Defence	-0.02500349	0.00215333	0.00358161	0.00573494	0.01233225	-0.01926855	-0.00693630

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.17958869	1.26902637	1.37561543	0.37561543
Mining & Quarrying	0.99481743	0.93188921	0.89600574	-0.10399426
Manufacturing	1.22809410	1.34300257	1.36777441	0.36777441
Construction	1.32064482	1.45885789	1.53715814	0.53715814
Trade and Transportation	0.89751864	0.78116919	0.72078462	-0.27921538
Service Industries	1.04309938	0.90694658	0.75446104	-0.24553896
Public admin. & Defence	0.91387872	0.77063429	0.27741341	-0.72258659

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, OUTPUT MULTIPLIERS

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.156076930	0.074926108	0.231003038	0.310036727	1.231003038	1.541039764
Mining & Quarrying	1.000000000	0.445188854	0.293600231	0.738789085	0.592962499	1.738789085	2.331751584
Manufacturing	1.000000000	0.483897563	0.326454304	0.810351867	0.316844283	1.810351867	2.127196150
Construction	1.000000000	0.450393150	0.303990462	0.754383612	0.698446054	1.754383612	2.452829666
Trade and Transportation	1.000000000	0.354629778	0.236919787	0.591549564	0.449107283	1.591549564	2.040656847
Service Industries	1.000000000	0.330936730	0.203796315	0.534733044	0.674737214	1.534733044	2.209470259
Public admin. & Defence	1.000000000	0.233083185	0.116051868	0.349135053	1.439580495	1.349135053	2.788715548

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.156076930	1.231003038	1.541039764	0.541039764
Mining & Quarrying	1.445188854	1.738789085	2.331751584	1.331751584
Manufacturing	1.483897563	1.810351867	2.127196150	1.127196150
Construction	1.450393150	1.754383612	2.452829666	1.452829666
Trade and Transportation	1.354629778	1.591549564	2.040656847	1.040656847
Service Industries	1.330936730	1.534733044	2.209470259	1.209470259
Public admin. & Defence	1.233083185	1.349135053	2.788715548	1.788715548

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, INCOME MULTIPLIERS

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.121777931	0.022273409	0.010387681	0.032661090	0.046370989	0.154439022	0.200810011
Mining & Quarrying	0.179592965	0.075151521	0.040628740	0.115780262	0.088687098	0.295373226	0.384060324
Manufacturing	0.060710697	0.054808436	0.042310946	0.097119382	0.047389169	0.157830079	0.205219248
Construction	0.246008193	0.061371661	0.040538041	0.101909702	0.104463863	0.347917895	0.452381758
Trade and Transportation	0.139502099	0.052006217	0.032206114	0.084212331	0.067171232	0.223714429	0.290885661
Service Industries	0.249139097	0.057924435	0.029044245	0.086968680	0.100917824	0.336107778	0.437025602
Public admin. & Defence	0.670437768	0.030840335	0.015822112	0.046662447	0.215312462	0.717100215	0.932412677

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.182901852	1.268202045	1.648985231	0.648985231
Mining & Quarrying	1.418454707	1.644681498	2.138504280	1.138504280
Manufacturing	1.902780547	2.599707913	3.380281535	2.380281535
Construction	1.249469988	1.414253286	1.838888994	0.838888994
Trade and Transportation	1.372798812	1.603663539	2.085170501	1.085170501
Service Industries	1.232498374	1.349076806	1.754142993	0.754142993
Public admin. & Defence	1.046000295	1.069599968	1.390752016	0.390752016

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, GVA MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.799098615	0.095341856	0.037072735	0.132414591	0.170075008	0.931513206	1.101588214
Mining & Quarrying	0.608291221	0.221901468	0.137642554	0.359544022	0.325277921	0.967835243	1.293113163
Manufacturing	0.256826194	0.209056565	0.150912459	0.359969024	0.173809389	0.616795218	0.790604606
Construction	0.370186300	0.197391428	0.142554353	0.339945781	0.383142408	0.710132081	1.093274489
Trade and Transportation	0.629558841	0.168369758	0.111087447	0.279457205	0.246364118	0.909016046	1.155380164
Service Industries	0.652983402	0.179142579	0.097958664	0.277101243	0.370136591	0.930084645	1.300221236
Public admin. & Defence	0.770187432	0.142033471	0.056242197	0.198275668	0.789702132	0.968463100	1.758165232

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.119311752	1.165704944	1.378538510	0.378538510
Mining & Quarrying	1.364794790	1.591072187	2.125812636	1.125812636
Manufacturing	1.814000169	2.401605569	3.078364377	2.078364377
Construction	1.533221862	1.918310000	2.953308887	1.953308887
Trade and Transportation	1.267440860	1.443893702	1.835221886	0.835221886
Service Industries	1.274344766	1.424361848	1.991201050	0.991201050
Public admin. & Defence	1.184414163	1.257438203	2.282775802	1.282775802

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, IMPORTS MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.01431793	0.00809906	0.00550601	0.01360508	0.01912518	0.02792301	0.04704819
Mining & Quarrying	0.02556343	0.02942784	0.02319060	0.05261844	0.03657798	0.07818187	0.11475985
Manufacturing	0.13243836	0.04257939	0.02630265	0.06888204	0.01954512	0.20132041	0.22086553
Construction	0.07438884	0.04004689	0.02395533	0.06400222	0.04308493	0.13839106	0.18147598
Trade and Transportation	0.03620806	0.02722517	0.01865986	0.04588504	0.02770401	0.08209310	0.10979710
Service Industries	0.03639678	0.01990864	0.01545789	0.03536653	0.04162240	0.07176331	0.11338571
Public admin. & Defence	0.01292603	0.01148015	0.00881422	0.02029437	0.08880317	0.03322040	0.12202357

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.56565879	1.95021229	3.28596270	2.28596270
Mining & Quarrying	2.15116935	3.05834807	4.48921935	3.48921935
Manufacturing	1.32150347	1.52010641	1.66768541	0.66768541
Construction	1.53834540	1.86037399	2.43955938	1.43955938
Trade and Transportation	1.75190921	2.26726022	3.03239391	2.03239391
Service Industries	1.54698910	1.97169402	3.11526792	2.11526792
Public admin. & Defence	1.88814157	2.57003870	9.44014092	8.44014092

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2017-18, TTM MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02396287	0.00366755	0.00225496	0.00592251	0.00446937	0.02988538	0.03435475
Mining & Quarrying	-0.09926727	0.00685897	0.00926254	0.01612151	0.00854792	-0.08314576	-0.07459784
Manufacturing	0.09698574	0.02375803	0.01240178	0.03615982	0.00456751	0.13314556	0.13771306
Construction	0.07664579	0.01828704	0.01052429	0.02881133	0.01006853	0.10545711	0.11552564
Trade and Transportation	-0.03922902	0.00790078	0.00774439	0.01564516	0.00647416	-0.02358386	-0.01710970
Service Industries	-0.03772233	0.00123395	0.00572443	0.00695838	0.00972675	-0.03076395	-0.02103719
Public admin. & Defence	-0.02500349	0.00439682	0.00368440	0.00808122	0.02075244	-0.01692227	0.00383017

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.15305131	1.24715360	1.43366590	0.43366590
Mining & Quarrying	0.93090397	0.83759487	0.75148472	-0.24851528
Manufacturing	1.24496419	1.37283643	1.41993104	0.41993104
Construction	1.23859162	1.37590230	1.50726673	0.50726673
Trade and Transportation	0.79859872	0.60118396	0.43614906	-0.56385094
Service Industries	0.96728862	0.81553678	0.55768545	-0.44231455
Public admin. & Defence	0.82415160	0.67679631	-0.15318527	-1.15318527

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, OUTPUT MULTIPLIERS

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.158256274	0.081303452	0.239559726	0.318824586	1.239559726	1.558384312
Mining & Quarrying	1.000000000	0.400197760	0.278860323	0.679058083	0.588390893	1.679058083	2.267448976
Manufacturing	1.000000000	0.513268813	0.369837965	0.883106779	0.318721773	1.883106779	2.201828552
Construction	1.000000000	0.446835412	0.334296673	0.781132084	0.694907518	1.781132084	2.476039602
Trade and Transportation	1.000000000	0.390894117	0.276490291	0.667384408	0.482659705	1.667384408	2.150044113
Service Industries	1.000000000	0.348846632	0.230387453	0.579234085	0.730958819	1.579234085	2.310192904
Public admin. & Defence	1.000000000	0.232222590	0.124419676	0.356642267	1.525344619	1.356642267	2.881986886

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.158256274	1.239559726	1.558384312	0.558384312
Mining & Quarrying	1.400197760	1.679058083	2.267448976	1.267448976
Manufacturing	1.513268813	1.883106779	2.201828552	1.201828552
Construction	1.446835412	1.781132084	2.476039602	1.476039602
Trade and Transportation	1.390894117	1.667384408	2.150044113	1.150044113
Service Industries	1.348846632	1.579234085	2.310192904	1.310192904
Public admin. & Defence	1.232222590	1.356642267	2.881986886	1.881986886

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, INCOME MULTIPLIERS

MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION

(Each product is produced in its own specific way, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.117282809	0.022828234	0.011178168	0.034006402	0.047470673	0.151289211	0.198759884
Mining & Quarrying	0.168712559	0.072178821	0.038312915	0.110491736	0.087607144	0.279204295	0.366811440
Manufacturing	0.049932711	0.054620417	0.046687295	0.101307712	0.047455365	0.151240424	0.198695788
Construction	0.235473603	0.051980193	0.042294958	0.094275151	0.103466699	0.329748754	0.433215453
Trade and Transportation	0.133030933	0.058605521	0.037396090	0.096001611	0.071864536	0.229032544	0.300897080
Service Industries	0.253317588	0.061211662	0.032326632	0.093538294	0.108834476	0.346855882	0.455690358
Public admin. & Defence	0.675602107	0.031190737	0.017016403	0.048207140	0.227112771	0.723809247	0.950922018

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.194642630	1.289952144	1.694706031	0.694706031
Mining & Quarrying	1.427821268	1.654911147	2.174179805	1.174179805
Manufacturing	2.093880458	3.028884671	3.979270968	2.979270968
Construction	1.220747433	1.400363990	1.839762281	0.839762281
Trade and Transportation	1.440540555	1.721648787	2.261858004	1.261858004
Service Industries	1.241640001	1.369253059	1.798889538	0.798889538
Public admin. & Defence	1.046167318	1.071354337	1.407517840	0.407517840

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, GVA MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

	Initial Effects	First Round Effects	Industrial Support Effects	Production Induced Effects	Consumptin Induced Effects	Simple Multipliers	Total Multipliers
Product	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Agriculture*	0.798838786	0.095334074	0.039363570	0.134697643	0.170753199	0.933536430	1.104289629
Mining & Quarrying	0.629471090	0.203361421	0.128554759	0.331916180	0.315125093	0.961387270	1.276512363
Manufacturing	0.208659029	0.210508228	0.165299656	0.375807883	0.170698136	0.584466912	0.755165048
Construction	0.364230513	0.170713814	0.150049202	0.320763015	0.372172308	0.684993529	1.057165837
Trade and Transportation	0.622619551	0.191078277	0.127557956	0.318636233	0.258498537	0.941255784	1.199754321
Service Industries	0.646115350	0.187865974	0.108388943	0.296254916	0.391480339	0.942370266	1.333850605
Public admin. & Defence	0.773594029	0.142525541	0.059488505	0.202014047	0.816930329	0.975608075	1.792538404

	Type 1A Multipliers	Type 1B Multipliers	Type 2A Multipliers	Type 2B Multipliers
Product	[8]	[9]	[10]	[11]
Agriculture*	1.119340817	1.168616804	1.382368568	0.382368568
Mining & Quarrying	1.323067135	1.527293764	2.027912615	1.027912615
Manufacturing	2.008862300	2.801062171	3.619134299	2.619134299
Construction	1.468697178	1.880659373	2.902463681	1.902463681
Trade and Transportation	1.306894116	1.511767150	1.926946108	0.926946108
Service Industries	1.290762282	1.458517069	2.064415597	1.064415597
Public admin. & Defence	1.184238161	1.261137029	2.317156464	1.317156464

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, IMPORTS MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

	Initial Effects	First Round Effects	Industrial Support Effects	Production Induced Effects	Consumptin Induced Effects	Simple Multipliers	Total Multipliers
Product	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Agriculture*	0.013030765	0.008513418	0.006281677	0.014795095	0.020682810	0.027825860	0.048508670
Mining & Quarrying	0.029004895	0.025706146	0.022903959	0.048610105	0.038170134	0.077614999	0.115785134
Manufacturing	0.149288651	0.049590876	0.031937687	0.081528563	0.020676141	0.230817214	0.251493354
Construction	0.079063583	0.046953872	0.028699582	0.075653453	0.045080088	0.154717036	0.199797124
Trade and Transportation	0.037780174	0.028663610	0.022680377	0.051343988	0.031311133	0.089124162	0.120435295
Service Industries	0.035028436	0.021004648	0.018327957	0.039332604	0.047418810	0.074361041	0.121779851
Public admin. & Defence	0.012705453	0.011089159	0.009773255	0.020862414	0.098952260	0.033567867	0.132520127

	Type 1A Multipliers	Type 1B Multipliers	Type 2A Multipliers	Type 2B Multipliers
Product	[8]	[9]	[10]	[11]
Agriculture*	1.653332123	2.135397229	3.722626363	2.722626363
Mining & Quarrying	1.886269242	2.675927658	3.991917074	2.991917074
Manufacturing	1.332181149	1.546113603	1.684611343	0.684611343
Construction	1.593874825	1.956868514	2.527043635	1.527043635
Trade and Transportation	1.758694486	2.359019334	3.187790875	2.187790875
Service Industries	1.599645592	2.122876386	3.476599683	2.476599683
Public admin. & Defence	1.872787384	2.642004766	10.43017740	9.430177398

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, TTM MULTIPLIERS
MODEL A: PRODUCT-BY-PRODUCT IOT BASED ON PRODUCT TECHNOLOGY ASSUMPTION
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02366105	0.00284967	0.00180034	0.00465001	0.00107277	0.02831106	0.02938383
Mining & Quarrying	-0.08003597	-0.00125470	0.00599972	0.00474502	0.00197979	-0.07529095	-0.07331116
Manufacturing	0.10179523	0.02456800	0.01201960	0.03658759	0.00107242	0.13838283	0.13945525
Construction	0.08354433	0.02242956	0.01053398	0.03296354	0.00233820	0.11650787	0.11884607
Trade and Transportation	-0.07249252	0.00009586	0.00616732	0.00626317	0.00162403	-0.06622934	-0.06460531
Service Industries	-0.04803255	-0.00325920	0.00432568	0.00106648	0.00245950	-0.04696607	-0.04450656
Public admin. & Defence	-0.02720507	0.00035988	0.00256953	0.00292941	0.00513242	-0.02427566	-0.01914324

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.12043707	1.19652600	1.24186500	0.24186500
Mining & Quarrying	1.01567670	0.94071395	0.91597764	-0.08402236
Manufacturing	1.24134721	1.35942343	1.36995852	0.36995852
Construction	1.26847500	1.39456352	1.42255102	0.42255102
Trade and Transportation	0.99867768	0.91360246	0.89119968	-0.10880032
Service Industries	1.06785406	0.97779672	0.92659184	-0.07340816
Public admin. & Defence	0.98677159	0.89232113	0.70366443	-0.29633557

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, OUTPUT MULTIPLIERS

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.160848117	0.083205706	0.244053823	0.314238862	1.244053823	1.558292685
Mining & Quarrying	1.000000000	0.421575016	0.297027089	0.718602106	0.517900120	1.718602106	2.236502226
Manufacturing	1.000000000	0.504909993	0.362097127	0.867007120	0.325473998	1.867007120	2.192481118
Construction	1.000000000	0.448694258	0.331366637	0.780060895	0.664145133	1.780060895	2.444206028
Trade and Transportation	1.000000000	0.402576368	0.285563078	0.688139447	0.458359105	1.688139447	2.146498552
Service Industries	1.000000000	0.349189941	0.232172663	0.581362604	0.697498083	1.581362604	2.278860688
Public admin. & Defence	1.000000000	0.232222590	0.125683350	0.357905941	1.475098624	1.357905941	2.833004565

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.160848117	1.244053823	1.558292685	0.558292685
Mining & Quarrying	1.421575016	1.718602106	2.236502226	1.236502226
Manufacturing	1.504909993	1.867007120	2.192481118	1.192481118
Construction	1.448694258	1.780060895	2.444206028	1.444206028
Trade and Transportation	1.402576368	1.688139447	2.146498552	1.146498552
Service Industries	1.349189941	1.581362604	2.278860688	1.278860688
Public admin. & Defence	1.232222590	1.357905941	2.833004565	1.833004565

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, INCOME MULTIPLIERS

MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION

(Each industry has its own specific way of production, irrespective of its product mix)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.119132750	0.023568204	0.011514697	0.035082901	0.046665713	0.154215651	0.200881364
Mining & Quarrying	0.146090445	0.068063477	0.040010390	0.108073867	0.076910215	0.254164312	0.331074527
Manufacturing	0.057915818	0.055663349	0.046150231	0.101813580	0.048334175	0.159729399	0.208063574
Construction	0.229719624	0.053753704	0.042462087	0.096215791	0.098628178	0.325935415	0.424563593
Trade and Transportation	0.128462796	0.058183233	0.038297975	0.096481208	0.068068139	0.224944004	0.293012143
Service Industries	0.249642979	0.060278679	0.032382028	0.092660708	0.103581223	0.342303687	0.445884909
Public admin. & Defence	0.675602107	0.031159615	0.017156679	0.048316293	0.219057977	0.723918401	0.942976377

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.197831446	1.294485784	1.686197662	0.686197662
Mining & Quarrying	1.465899582	1.739773690	2.266229855	1.266229855
Manufacturing	1.961107872	2.757958066	3.592517200	2.592517200
Construction	1.233997006	1.418840103	1.848181645	0.848181645
Trade and Transportation	1.452918939	1.751043969	2.280910523	1.280910523
Service Industries	1.241459542	1.371172898	1.786090325	0.786090325
Public admin. & Defence	1.046121251	1.071515901	1.395757010	0.395757010

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, GVA MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.796761896	0.097255158	0.040303434	0.137558592	0.166995877	0.934320488	1.101316365
Mining & Quarrying	0.549224899	0.202073471	0.135999238	0.338072709	0.275227527	0.887297608	1.162525135
Manufacturing	0.236324318	0.211025565	0.162871224	0.373896789	0.172966563	0.610221107	0.783187670
Construction	0.360153099	0.178983833	0.149699943	0.328683776	0.352946476	0.688836875	1.041783351
Trade and Transportation	0.579019544	0.191182663	0.131102604	0.322285268	0.243585661	0.901304812	1.144890472
Service Industries	0.644816389	0.184871475	0.108747230	0.293618705	0.370671226	0.938435094	1.309106320
Public admin. & Defence	0.773594029	0.140307720	0.059925554	0.200233273	0.783911280	0.973827302	1.757738582

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.122063014	1.172647051	1.382240253	0.382240253
Mining & Quarrying	1.367924819	1.615545126	2.116665026	1.116665026
Manufacturing	1.892949006	2.582134214	3.314037574	2.314037574
Construction	1.496965967	1.912622372	2.892612483	1.892612483
Trade and Transportation	1.330183438	1.556605163	1.977291586	0.977291586
Service Industries	1.286704057	1.455352423	2.030200135	1.030200135
Public admin. & Defence	1.181371255	1.258835081	2.272171859	1.272171859

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, IMPORTS MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.013329912	0.008475383	0.006413145	0.014888528	0.020716352	0.028218440	0.048934792
Mining & Quarrying	0.051957891	0.030997271	0.024675741	0.055673011	0.034142820	0.107630902	0.141773723
Manufacturing	0.141462242	0.047631142	0.030980738	0.078611880	0.021457034	0.220074122	0.241531156
Construction	0.081076201	0.044994350	0.028164171	0.073158521	0.043784095	0.154234722	0.198018817
Trade and Transportation	0.049602561	0.031137323	0.023614783	0.054752106	0.030217550	0.104354667	0.134572217
Service Industries	0.035401573	0.021911461	0.018605036	0.040516497	0.045982905	0.075918071	0.121900975
Public admin. & Defence	0.012705453	0.011666492	0.009913615	0.021580106	0.097246603	0.034285559	0.131532162

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.635816888	2.116926198	3.671051337	2.671051337
Mining & Quarrying	1.596584465	2.071502527	2.728627361	1.728627361
Manufacturing	1.336705691	1.555709274	1.707389562	0.707389562
Construction	1.554963711	1.902342728	2.442379067	1.442379067
Trade and Transportation	1.627736192	2.103816099	2.713009434	1.713009434
Service Industries	1.618940324	2.144482947	3.443377323	2.443377323
Public admin. & Defence	1.918227139	2.698491708	10.35241827	9.352418273

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, TTM MULTIPLIERS
MODEL B: PRODUCT-BY-PRODUCT IOT BASED ON INDUSTRY TECHNOLOGY ASSUMPTION
(Each industry has its own specific way of production, irrespective of its product mix)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Product	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02268608	0.00239301	0.00178594	0.00417895	0.00164215	0.02686503	0.02850718
Mining & Quarrying	-0.04519173	0.00478195	0.00724383	0.01202578	0.00270644	-0.03316595	-0.03045952
Manufacturing	0.09069202	0.02220594	0.01122561	0.03343155	0.00170086	0.12412358	0.12582444
Construction	0.08374310	0.01958647	0.00993625	0.02952271	0.00347069	0.11326582	0.11673650
Trade and Transportation	-0.05291254	0.00353915	0.00689913	0.01043828	0.00239529	-0.04247426	-0.04007897
Service Industries	-0.04747653	-0.00189040	0.00466643	0.00277602	0.00364498	-0.04470051	-0.04105553
Public admin. & Defence	-0.02720507	0.00121964	0.00270932	0.00392896	0.00770856	-0.02327611	-0.01556755

Product	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.10548352	1.18420762	1.25659329	0.25659329
Mining & Quarrying	0.89418534	0.73389431	0.67400639	-0.32599361
Manufacturing	1.24485002	1.36862725	1.38738149	0.38738149
Construction	1.23388751	1.35253906	1.39398349	0.39398349
Trade and Transportation	0.93311313	0.80272577	0.75745692	-0.24254308
Service Industries	1.03981767	0.94152852	0.86475415	-0.13524585
Public admin. & Defence	0.95516871	0.85557989	0.57222973	-0.42777027

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, OUTPUT MULTIPLIERS

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION

(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.160848117	0.083330850	0.244178967	0.313177746	1.244178967	1.557356713
Mining & Quarrying	1.000000000	0.400197760	0.278860323	0.679058083	0.567985026	1.679058083	2.247043109
Manufacturing	1.000000000	0.504978094	0.363571902	0.868549996	0.323282166	1.868549996	2.191832163
Construction	1.000000000	0.446835412	0.334296673	0.781132084	0.670807569	1.781132084	2.451939653
Trade and Transportation	1.000000000	0.389355626	0.274803417	0.664159044	0.474690708	1.664159044	2.138849752
Service Industries	1.000000000	0.348979452	0.230510852	0.579490304	0.705199072	1.579490304	2.284689376
Public admin. & Defence	1.000000000	0.232222590	0.124419676	0.356642266	1.472444446	1.356642266	2.829086713

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.160848117	1.244178967	1.557356713	0.557356713
Mining & Quarrying	1.400197760	1.679058083	2.247043109	1.247043109
Manufacturing	1.504978094	1.868549996	2.191832163	1.191832163
Construction	1.446835412	1.781132084	2.451939653	1.451939653
Trade and Transportation	1.389355626	1.664159044	2.138849752	1.138849752
Service Industries	1.348979452	1.579490304	2.284689376	1.284689376
Public admin. & Defence	1.232222590	1.356642266	2.829086713	1.829086713

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, INCOME MULTIPLIERS

MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION

(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.119132750	0.023350212	0.011465766	0.034815978	0.046629899	0.153948728	0.200578627
Mining & Quarrying	0.168712559	0.072178821	0.038312915	0.110491736	0.084568859	0.279204295	0.363773154
Manufacturing	0.057830568	0.055023050	0.046062137	0.101085187	0.048134374	0.158915755	0.207050130
Construction	0.235473603	0.051980193	0.042294958	0.094275151	0.099878391	0.329748754	0.429627145
Trade and Transportation	0.137432144	0.058700878	0.037210602	0.095911480	0.070678010	0.233343625	0.304021635
Service Industries	0.253110066	0.061204998	0.032339516	0.093544513	0.104999037	0.346654579	0.451653616
Public admin. & Defence	0.675602107	0.031190737	0.017016403	0.048207140	0.219236319	0.723809247	0.943045566

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.196001618	1.292245230	1.683656486	0.683656486
Mining & Quarrying	1.427821269	1.654911148	2.156171154	1.156171154
Manufacturing	1.951452697	2.747954235	3.580288682	2.580288682
Construction	1.220747433	1.400363991	1.824523598	0.824523598
Trade and Transportation	1.427126261	1.697882439	2.212158122	1.212158122
Service Industries	1.241811788	1.369580377	1.784415861	0.784415861
Public admin. & Defence	1.046167318	1.071354337	1.395859421	0.395859421

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, GVA MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.796761896	0.096592418	0.040302248	0.136894665	0.167728916	0.933656561	1.101385477
Mining & Quarrying	0.629471090	0.203361421	0.128554759	0.331916180	0.304196303	0.961387270	1.265583573
Manufacturing	0.236145468	0.209035288	0.162756014	0.371791302	0.173140550	0.607936770	0.781077320
Construction	0.364230513	0.170713814	0.150049202	0.320763016	0.359265074	0.684993529	1.044258604
Trade and Transportation	0.623479247	0.190960741	0.126856574	0.317817315	0.254230573	0.941296562	1.195527135
Service Industries	0.645830655	0.187878726	0.108439503	0.296318229	0.377684166	0.942148884	1.319833050
Public admin. & Defence	0.773594029	0.142525542	0.059488505	0.202014047	0.788598531	0.975608075	1.764206606

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.121231221	1.171813770	1.382326994	0.382326994
Mining & Quarrying	1.323067135	1.527293764	2.010550753	1.010550753
Manufacturing	1.885197116	2.574416414	3.307610878	2.307610878
Construction	1.468697178	1.880659373	2.867026691	1.867026691
Trade and Transportation	1.306282433	1.509748025	1.917509108	0.917509108
Service Industries	1.290910201	1.458817225	2.043620939	1.043620939
Public admin. & Defence	1.184238161	1.261137029	2.280532865	1.280532865

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, IMPORTS MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.013329912	0.008683286	0.006445495	0.015128781	0.020316488	0.028458693	0.048775181
Mining & Quarrying	0.029004895	0.025706146	0.022903959	0.048610105	0.036846363	0.077614999	0.114461363
Manufacturing	0.141508697	0.048204224	0.031319742	0.079523966	0.020971983	0.221032663	0.242004646
Construction	0.079063583	0.046953871	0.028699582	0.075653453	0.043516674	0.154717036	0.198233710
Trade and Transportation	0.037679490	0.028383373	0.022521125	0.050904499	0.030794168	0.088583989	0.119378157
Service Industries	0.035096728	0.021029028	0.018339908	0.039368935	0.045747722	0.074465663	0.120213386
Public admin. & Defence	0.012705453	0.011089159	0.009773255	0.020862414	0.095520517	0.033567867	0.129088384

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.651413601	2.134949786	3.659077457	2.659077457
Mining & Quarrying	1.886269241	2.675927655	3.946277503	2.946277503
Manufacturing	1.340644960	1.561972290	1.710175074	0.710175074
Construction	1.593874824	1.956868512	2.507269502	1.507269502
Trade and Transportation	1.753284436	2.350986928	3.168252976	2.168252976
Service Industries	1.599173449	2.121726646	3.425202061	2.425202061
Public admin. & Defence	1.872787383	2.642004762	10.16007732	9.160077318

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, TTM MULTIPLIERS
MODEL C: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED INDUSTRY SALES STRUCTURE ASSUMPTION
(EACH INDUSTRY HAS ITS OWN SPECIFIC SALES STRUCTURE, IRRESPECTIVE OF ITS PRODUCT MIX)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02268608	0.00276659	0.00183469	0.00460128	0.00105377	0.02728736	0.02834113
Mining & Quarrying	-0.08003597	-0.00125470	0.00599972	0.00474502	0.00191113	-0.07529095	-0.07337982
Manufacturing	0.09075258	0.02299922	0.01163336	0.03463258	0.00108777	0.12538516	0.12647292
Construction	0.08354433	0.02242956	0.01053398	0.03296354	0.00225711	0.11650787	0.11876498
Trade and Transportation	-0.07159754	-0.00002690	0.00609993	0.00607303	0.00159722	-0.06552451	-0.06392729
Service Industries	-0.04795722	-0.00323872	0.00433198	0.00109326	0.00237283	-0.04686396	-0.04449114
Public admin. & Defence	-0.02720507	0.00035988	0.00256953	0.00292941	0.00495442	-0.02427566	-0.01932124

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.12195108	1.20282383	1.24927380	0.24927380
Mining & Quarrying	1.01567670	0.94071395	0.91683552	-0.08316448
Manufacturing	1.25342773	1.38161536	1.39360143	0.39360143
Construction	1.26847500	1.39456351	1.42158039	0.42158039
Trade and Transportation	1.00037573	0.91517822	0.89286991	-0.10713009
Service Industries	1.06753352	0.97720342	0.92772546	-0.07227454
Public admin. & Defence	0.98677159	0.89232113	0.71020720	-0.28979280

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, OUTPUT MULTIPLIERS

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	1.000000000	0.160848117	0.083205706	0.244053823	0.314238862	1.244053823	1.558292685
Mining & Quarrying	1.000000000	0.400197760	0.280334232	0.680531992	0.567263844	1.680531992	2.247795835
Manufacturing	1.000000000	0.504978094	0.362154048	0.867132143	0.325308216	1.867132143	2.192440359
Construction	1.000000000	0.446835412	0.330362201	0.777197613	0.675489109	1.777197613	2.452686722
Trade and Transportation	1.000000000	0.389355626	0.275698082	0.665053708	0.475234474	1.665053708	2.140288182
Service Industries	1.000000000	0.348979452	0.231770676	0.580750129	0.705054341	1.580750129	2.285804470
Public admin. & Defence	1.000000000	0.232222590	0.125683350	0.357905941	1.475098624	1.357905941	2.833004565

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.160848117	1.244053823	1.558292685	0.558292685
Mining & Quarrying	1.400197760	1.680531992	2.247795835	1.247795835
Manufacturing	1.504978094	1.867132143	2.192440359	1.192440359
Construction	1.446835412	1.777197613	2.452686722	1.452686722
Trade and Transportation	1.389355626	1.665053708	2.140288182	1.140288182
Service Industries	1.348979452	1.580750129	2.285804470	1.285804470
Public admin. & Defence	1.232222590	1.357905941	2.833004565	1.833004565

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, INCOME MULTIPLIERS

MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION

(Each product has its own specific sales structure, irrespective of the industry where it is produced)

BASIC VALUES, 7 INDUSTRIES

(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.119132750	0.023568204	0.011514697	0.035082901	0.046665713	0.154215651	0.200881364
Mining & Quarrying	0.168712559	0.071242332	0.038435128	0.109677460	0.084240923	0.278390019	0.362630943
Manufacturing	0.057830568	0.055661219	0.046156252	0.101817471	0.048309556	0.159648040	0.207957596
Construction	0.235473603	0.053687918	0.042341057	0.096028975	0.100312803	0.331502577	0.431815380
Trade and Transportation	0.137432144	0.058507074	0.037286530	0.095793604	0.070574198	0.233225748	0.303799946
Service Industries	0.253110066	0.060538510	0.032363414	0.092901925	0.104703357	0.346011991	0.450715347
Public admin. & Defence	0.675602107	0.031159615	0.017156679	0.048316294	0.219057977	0.723918401	0.942976377

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.197831447	1.294485783	1.686197662	0.686197662
Mining & Quarrying	1.422270469	1.650084738	2.149400992	1.149400992
Manufacturing	1.962487845	2.760616816	3.595980490	2.595980490
Construction	1.227999730	1.407812058	1.833816510	0.833816510
Trade and Transportation	1.425716081	1.697024733	2.210545047	1.210545047
Service Industries	1.239178597	1.367041606	1.780708903	0.780708903
Public admin. & Defence	1.046121252	1.071515901	1.395757011	0.395757011

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, GVA MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.796761896	0.097255158	0.040303434	0.137558592	0.166995877	0.934320488	1.101316365
Mining & Quarrying	0.629471090	0.199776048	0.129105536	0.328881585	0.301460878	0.958352674	1.259813552
Manufacturing	0.236145468	0.211036837	0.162894920	0.373931757	0.172878461	0.610077225	0.782955687
Construction	0.364230513	0.177907955	0.149269018	0.327176973	0.358975003	0.691407487	1.050382490
Trade and Transportation	0.623479247	0.188611808	0.127007993	0.315619801	0.252553734	0.939099049	1.191652782
Service Industries	0.645830655	0.185211865	0.108614186	0.293826051	0.374686846	0.939656706	1.314343553
Public admin. & Defence	0.773594029	0.140307720	0.059925554	0.200233274	0.783911281	0.973827302	1.757738583

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.122063014	1.172647051	1.382240253	0.382240253
Mining & Quarrying	1.317371284	1.522472898	2.001384294	1.001384294
Manufacturing	1.893673032	2.583480553	3.315565155	2.315565155
Construction	1.488448794	1.898268984	2.883839906	1.883839906
Trade and Transportation	1.302514974	1.506223427	1.911295022	0.911295022
Service Industries	1.286780851	1.454958352	2.035121037	1.035121037
Public admin. & Defence	1.181371255	1.258835082	2.272171860	1.272171860

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, IMPORTS MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.013329912	0.008475383	0.006413145	0.014888528	0.020716352	0.028218441	0.048934792
Mining & Quarrying	0.029004895	0.026730905	0.023058300	0.049789205	0.037397148	0.078794100	0.116191248
Manufacturing	0.141508697	0.047642439	0.030986165	0.078628603	0.021446104	0.220137300	0.241583404
Construction	0.079063583	0.044911978	0.028072235	0.072984213	0.044531952	0.152047796	0.196579748
Trade and Transportation	0.037679490	0.029007653	0.022665138	0.051672790	0.031330067	0.089352280	0.120682347
Service Industries	0.035096728	0.021766805	0.018556796	0.040323601	0.046481055	0.075420330	0.121901384
Public admin. & Defence	0.012705453	0.011666492	0.009913615	0.021580106	0.097246603	0.034285559	0.131532162

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.635816887	2.116926201	3.671051337	2.671051337
Mining & Quarrying	1.921599796	2.716579423	4.005918648	3.005918648
Manufacturing	1.336674988	1.555645025	1.707198285	0.707198285
Construction	1.568048854	1.923107838	2.486350110	1.486350110
Trade and Transportation	1.769852579	2.371377112	3.202865718	2.202865718
Service Industries	1.620194715	2.148927650	3.473297671	2.473297671
Public admin. & Defence	1.918227130	2.698491702	10.35241826	9.352418255

Agriculture - Agriculture, Livestock, Forestry, Logging, Fishing, and Aquaculture

INDIA: INPUT-OUTPUT MULTIPLIERS 2018-19, TTM MULTIPLIERS
MODEL D: INDUSTRY-BY-INDUSTRY IOT BASED ON FIXED PRODUCT SALES STRUCTURE ASSUMPTION
(Each product has its own specific sales structure, irrespective of the industry where it is produced)
BASIC VALUES, 7 INDUSTRIES
(₹ CRORE)

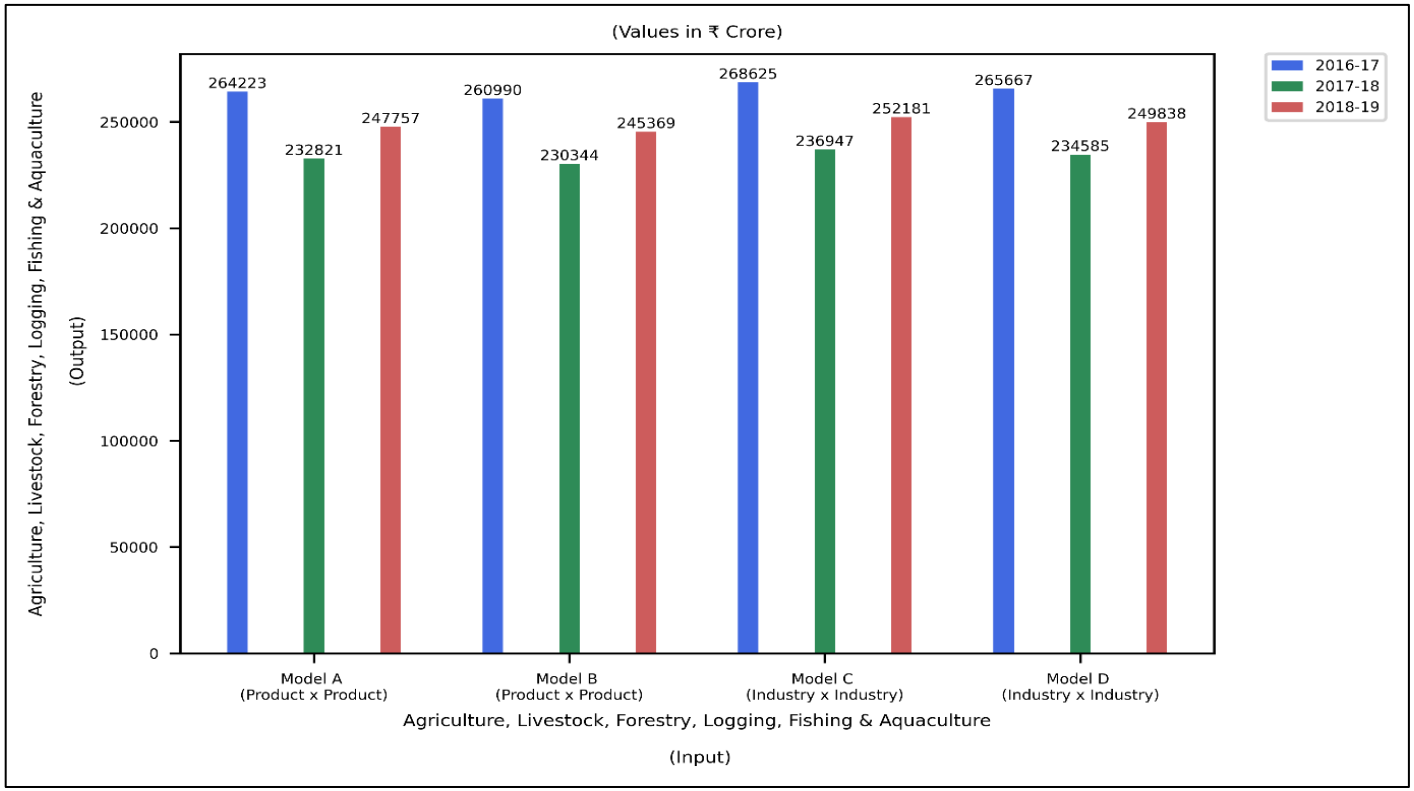
Industry	Initial Effects [1]	First Round Effects [2]	Industrial Support Effects [3]	Production Induced Effects [4]	Consumptin Induced Effects [5]	Simple Multipliers [6]	Total Multipliers [7]
Agriculture*	0.02268608	0.00239301	0.00178594	0.00417895	0.00164215	0.02686503	0.02850718
Mining & Quarrying	-0.08003597	0.00031324	0.00622251	0.00653575	0.00296440	-0.07350021	-0.07053581
Manufacturing	0.09075258	0.02221654	0.01122849	0.03344503	0.00169999	0.12419761	0.12589760
Construction	0.08354433	0.01950426	0.00989440	0.02939866	0.00352997	0.11294299	0.11647296
Trade and Transportation	-0.07159754	0.00112064	0.00634018	0.00746083	0.00248348	-0.06413672	-0.06165324
Service Industries	-0.04795722	-0.00205779	0.00462883	0.00257104	0.00368447	-0.04538618	-0.04170171
Public admin. & Defence	-0.02720507	0.00121964	0.00270932	0.00392896	0.00770856	-0.02327611	-0.01556755

Industry	Type 1A Multipliers [8]	Type 1B Multipliers [9]	Type 2A Multipliers [10]	Type 2B Multipliers [11]
Agriculture*	1.10548352	1.18420762	1.25659329	0.25659329
Mining & Quarrying	0.99608623	0.91833980	0.88130141	-0.11869859
Manufacturing	1.24480343	1.36852982	1.38726199	0.38726199
Construction	1.23346005	1.35189299	1.39414561	0.39414561
Trade and Transportation	0.98434803	0.89579492	0.86110830	-0.13889170
Service Industries	1.04290889	0.94638886	0.86956064	-0.13043936
Public admin. & Defence	0.95516872	0.85557990	0.57222975	-0.42777025

ANNEXURE - IV

Annexure - IV

Graphs generated comparing throughout 3 years (2016-17, 2017-18, and 2018-19) between input and output classified by model type*



Gph 101 *– Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (INPUT)* ***vs*** *Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (OUTPUT)*

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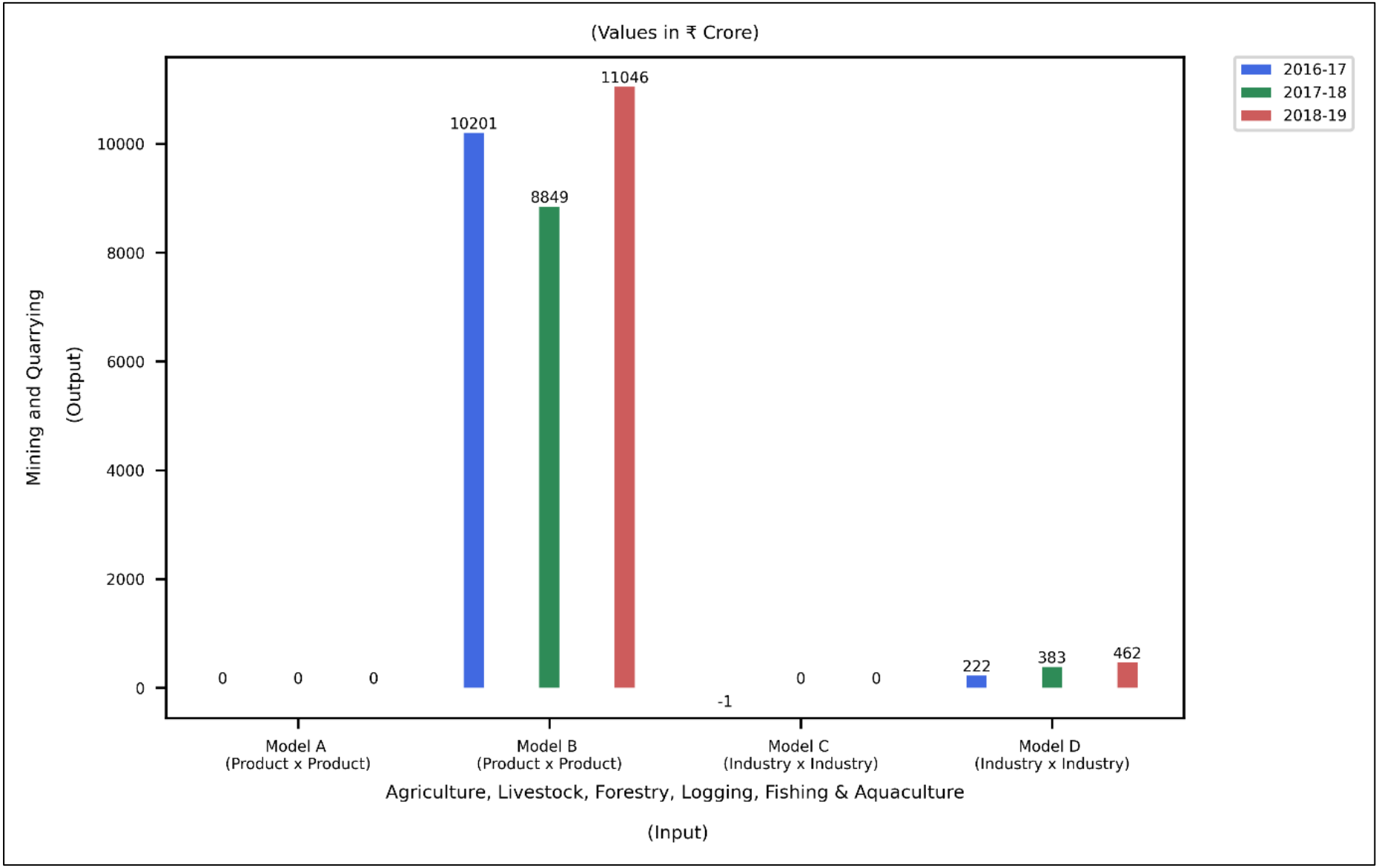
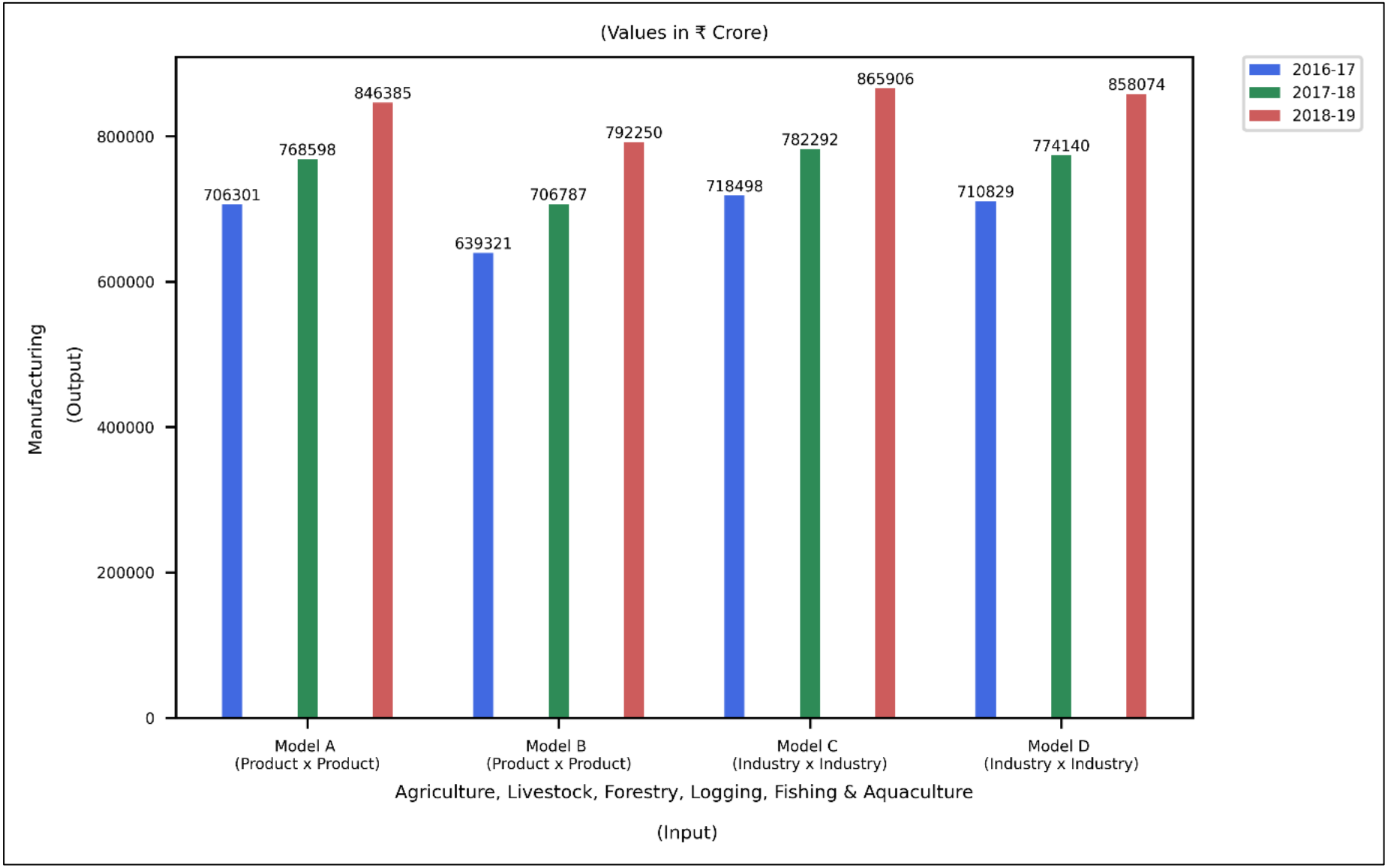
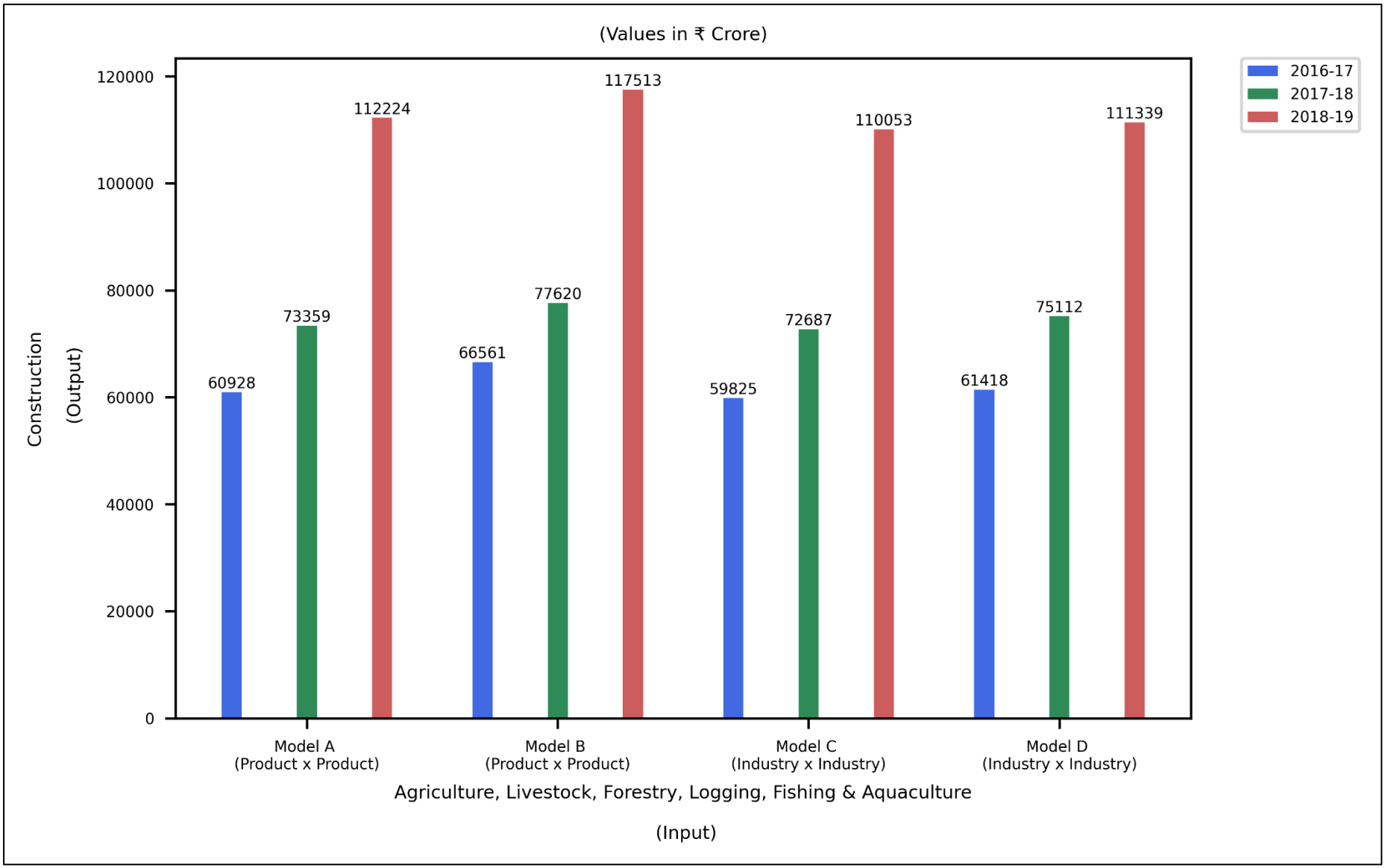
*__Model A:__ Product-by-Product IOT based on Product Technology Assumption
(Each product is produced in its own specific way, irrespective of the industry where it is produced)
Model B: Product-by-Product IOT based on Industry Technology Assumption
(Each industry has its own specific way of production, irrespective of its product mix)
Model C: Industry-by-Industry IOT based on Fixed Industry Sales Structure Assumption
(Each industry has its own specific sales structure, irrespective of its product mix)
Model D: Industry-by-Industry IOT based on Fixed Product Sales Structure Assumption
(Each product has its own specific sales structure, irrespective of the industry where it is produced)



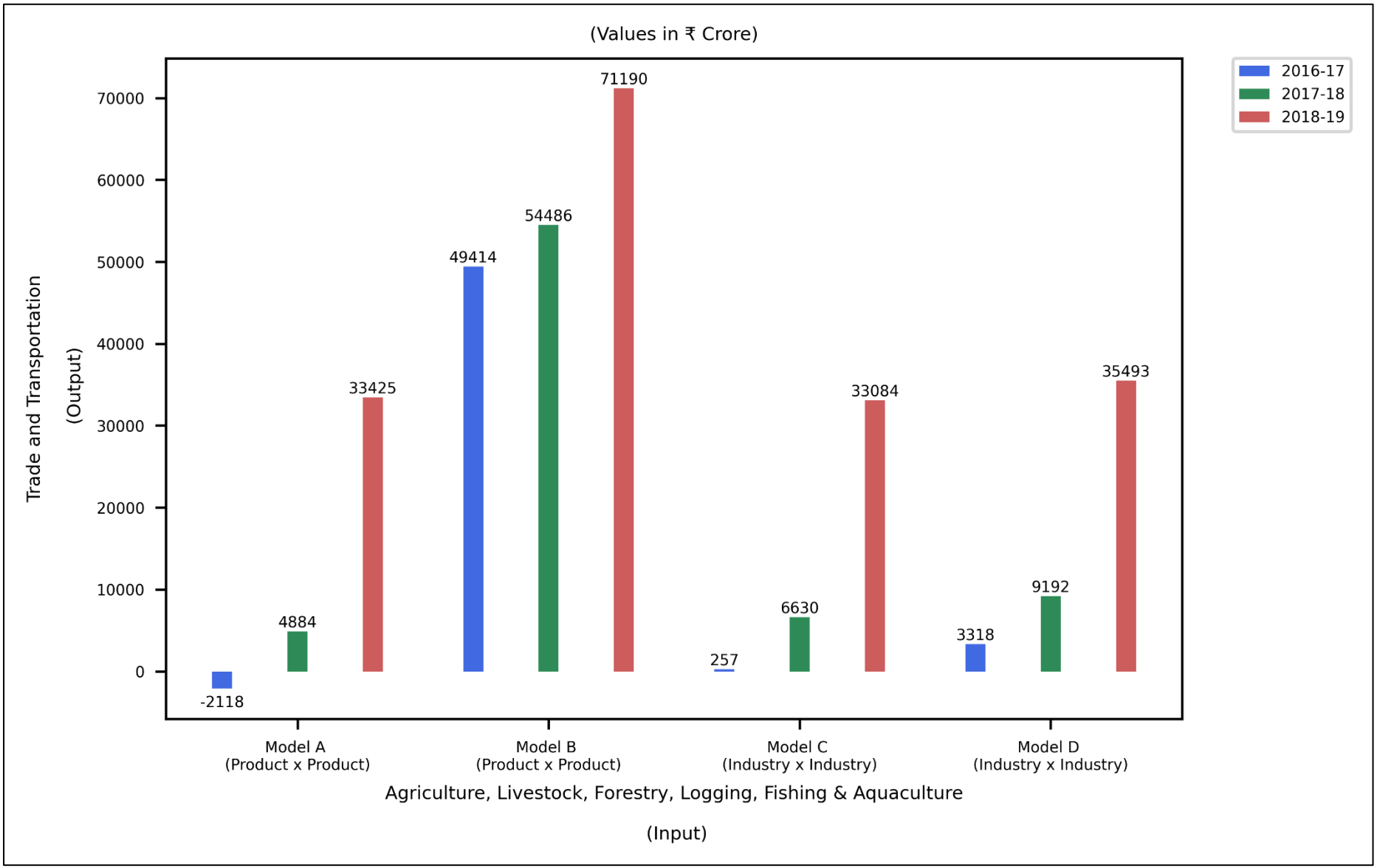
Gph 102 *– Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (INPUT)* ***vs*** *Mining and Quarrying (OUTPUT)*



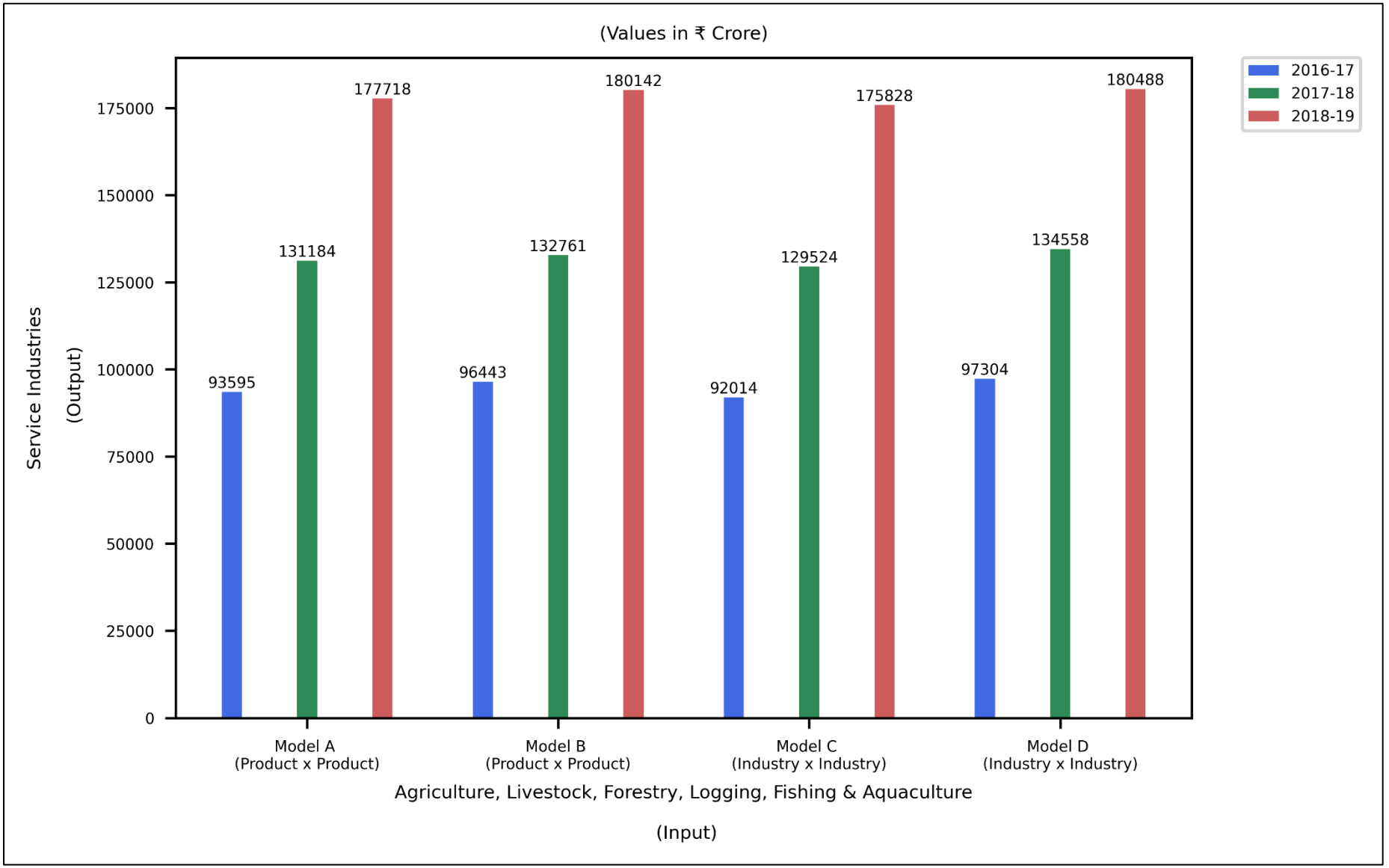
Gph 103 *– Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (INPUT)* ***vs*** *Manufacturing (OUTPUT)*



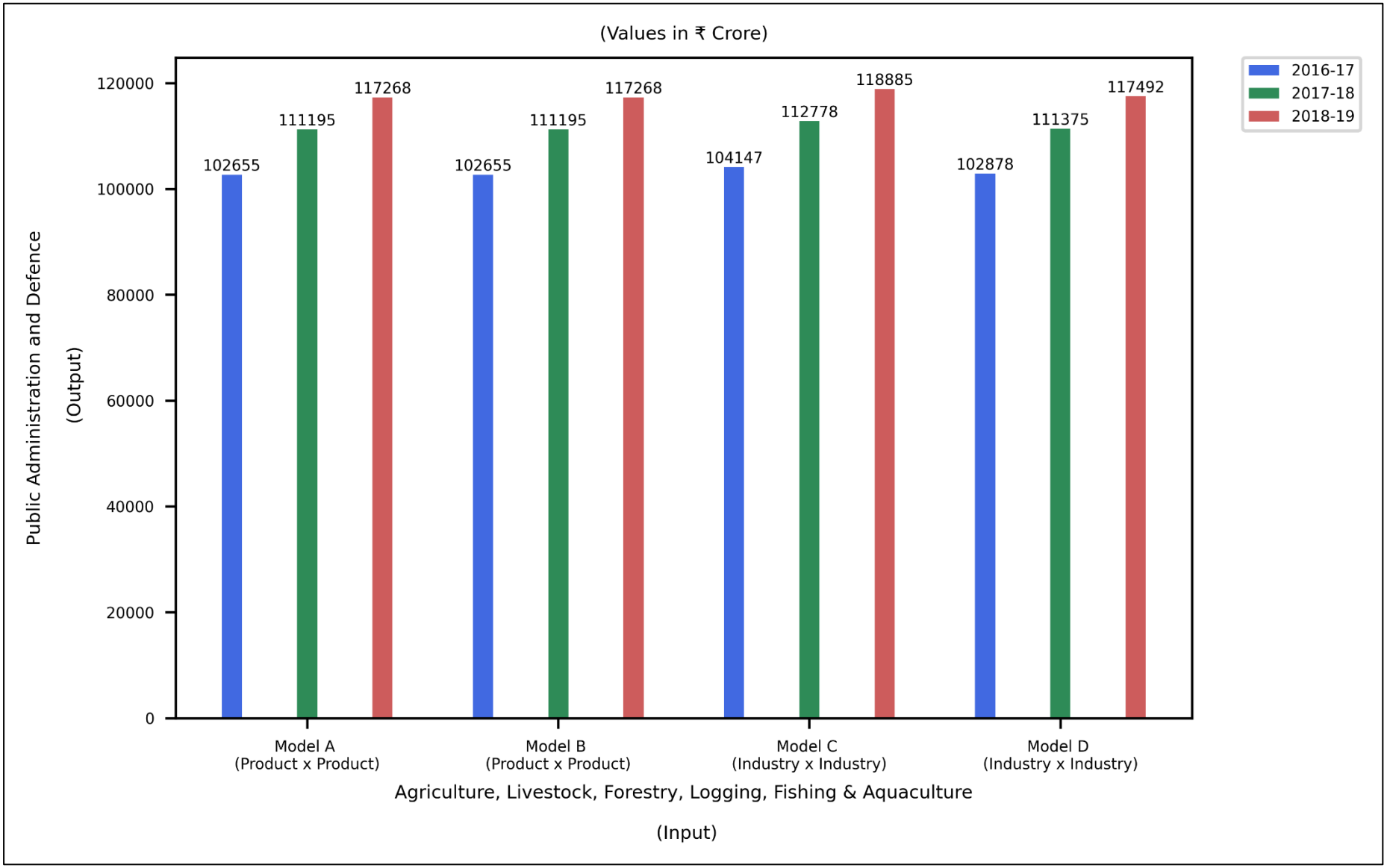
Gph 104 *– Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (INPUT)* ***vs*** *Construction (OUTPUT)*



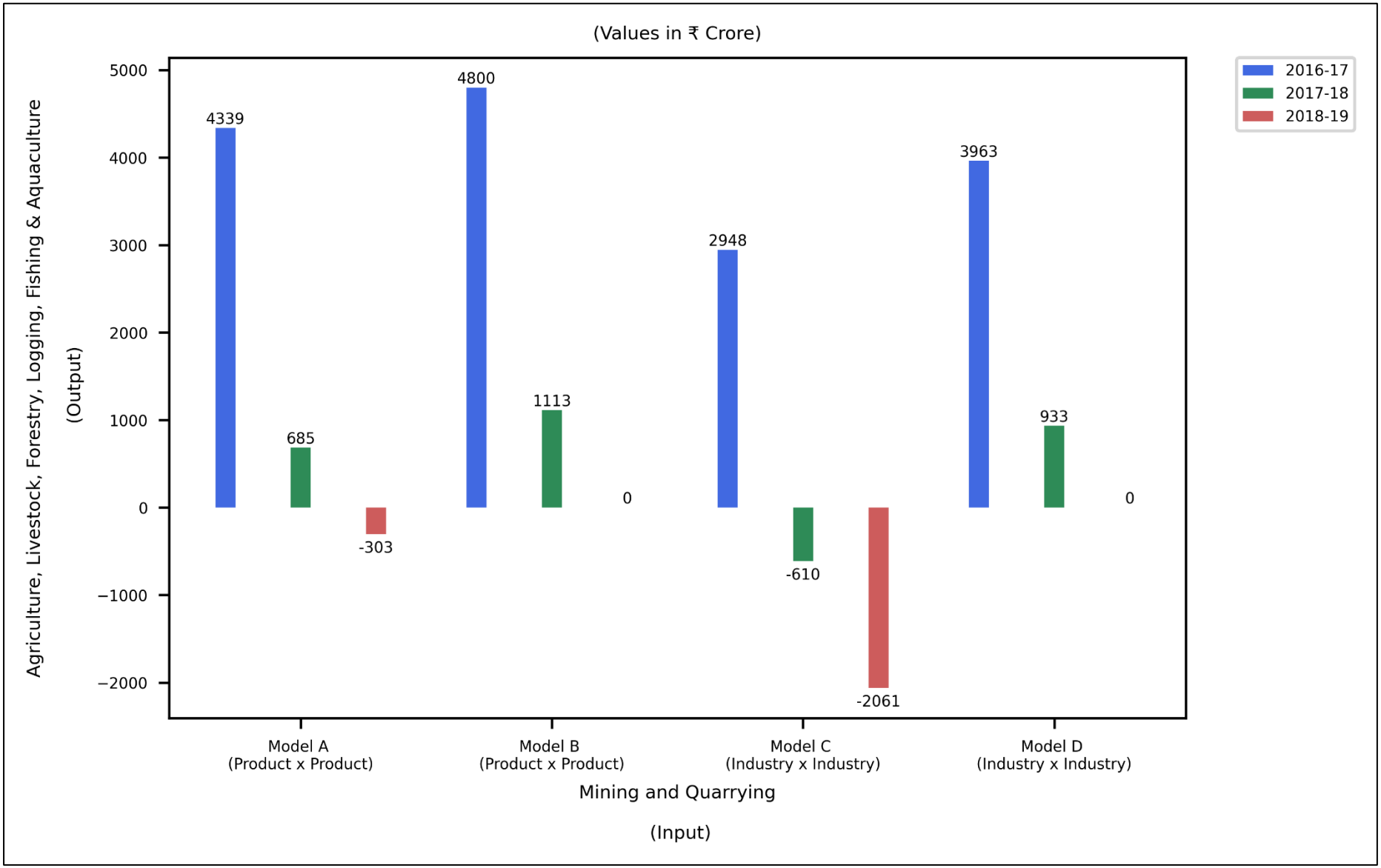
Gph 105 *– Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (INPUT)* ***vs*** *Trade and Transportation (OUTPUT)*



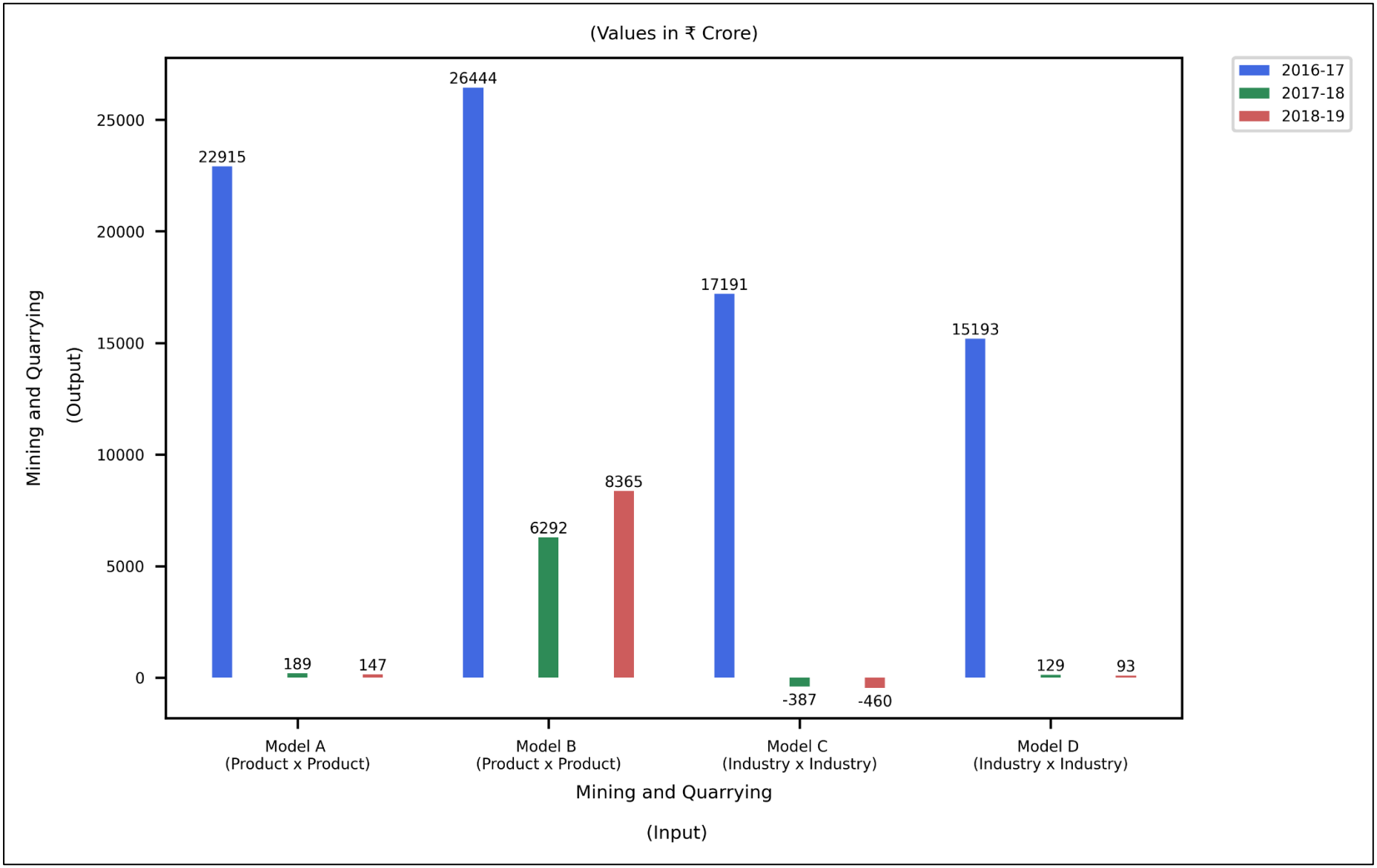
Gph 106 *– Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (INPUT)* ***vs*** *Service Industries (OUTPUT)*



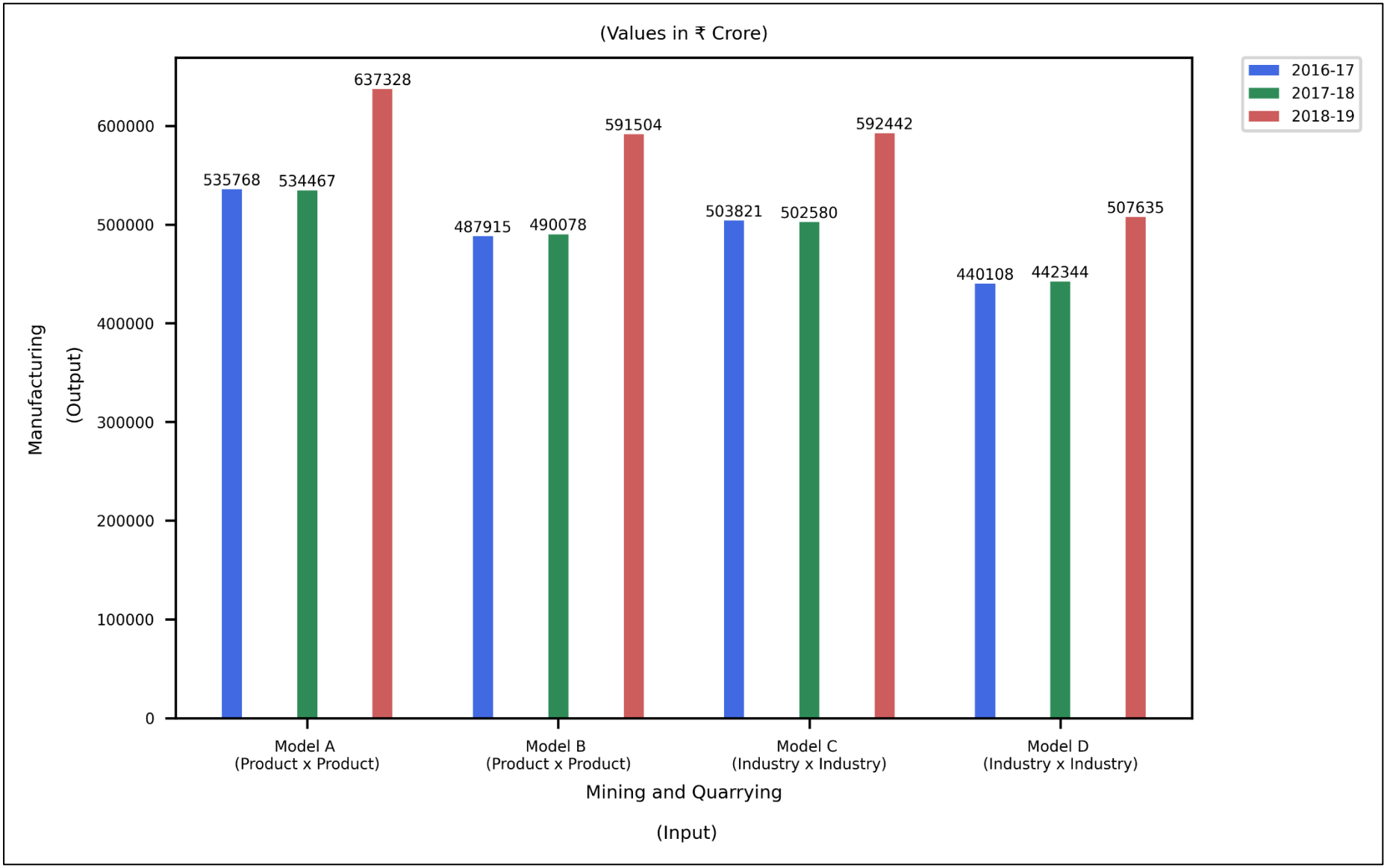
Gph 107 *– Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (INPUT)* ***vs*** *Public Administration and Defence (OUTPUT)*



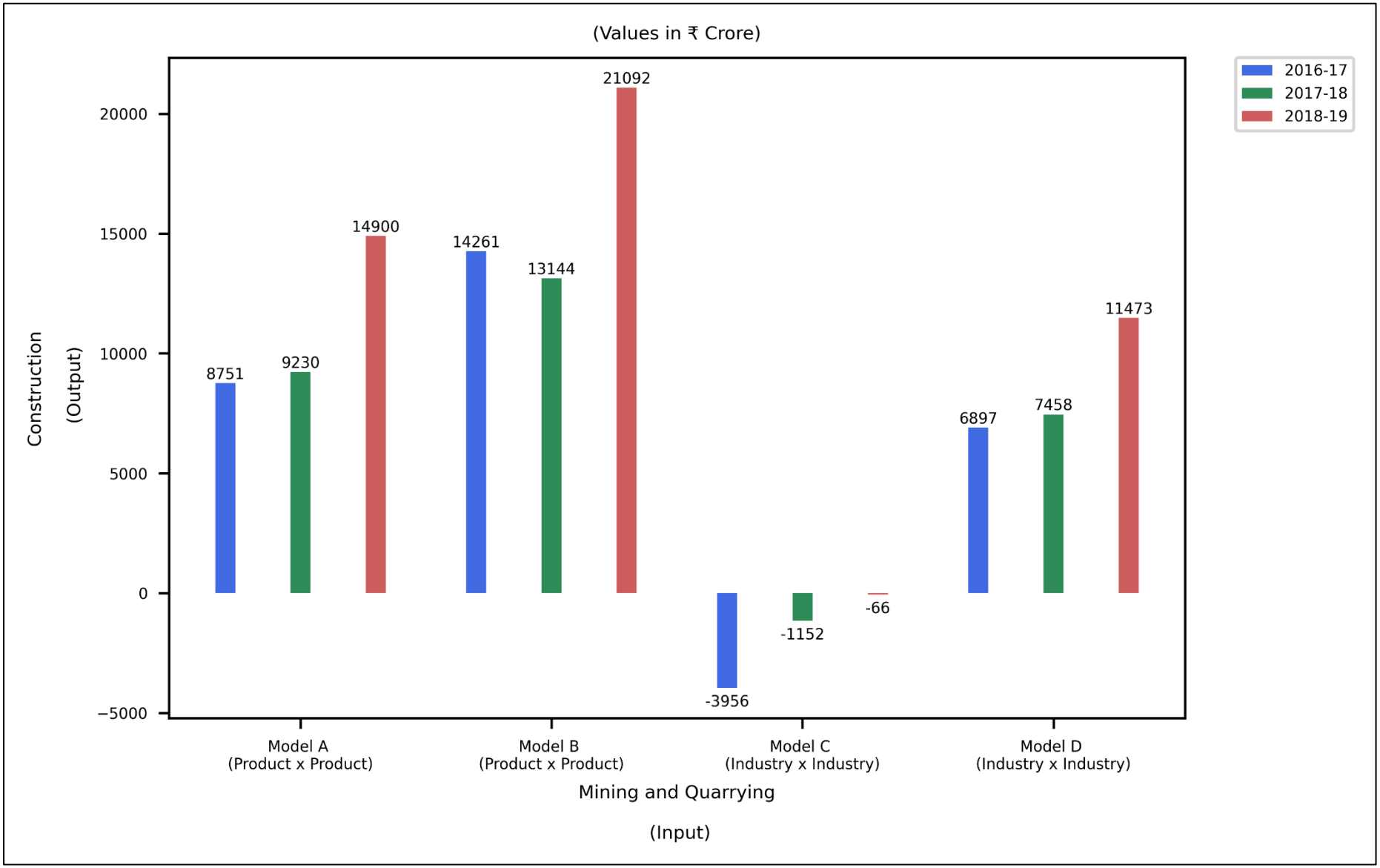
Gph 201 *– Mining and Quarrying (INPUT)* ***vs*** *Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (OUTPUT)*



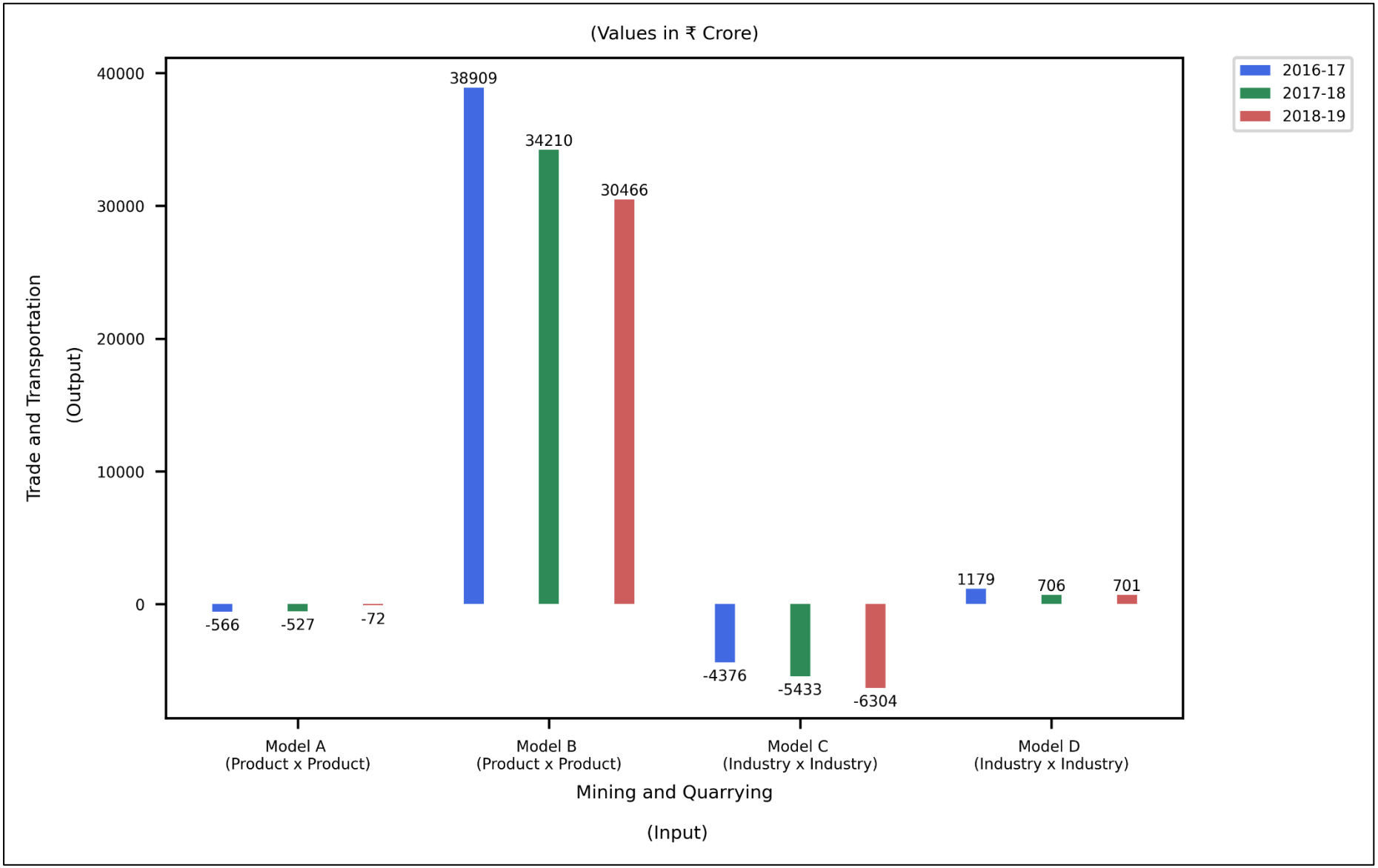
Gph 202 *– Mining and Quarrying (INPUT)* ***vs*** *Mining and Quarrying (OUTPUT)*



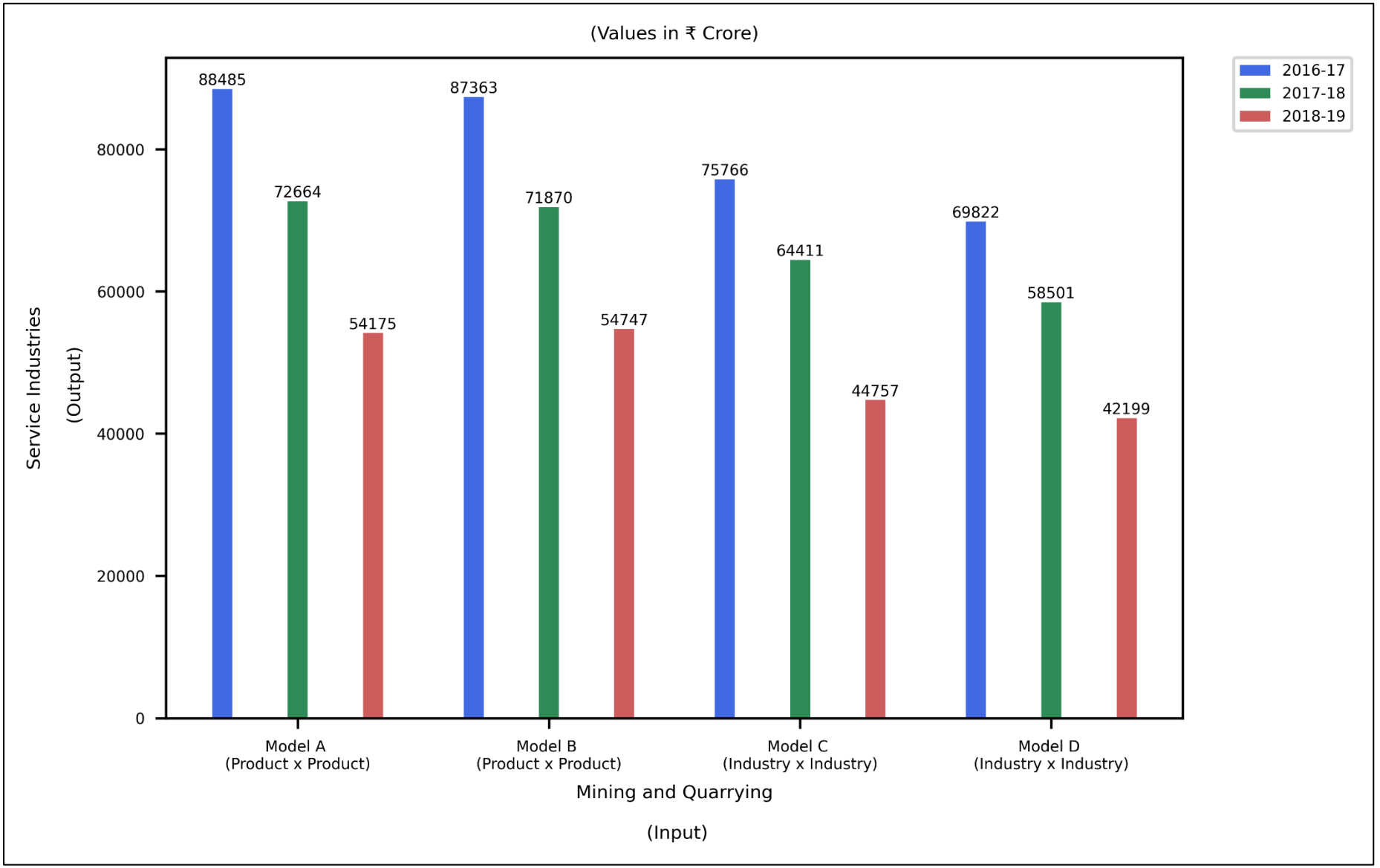
Gph 203 *– Mining and Quarrying (INPUT)* ***vs*** *Manufacturing (OUTPUT)*



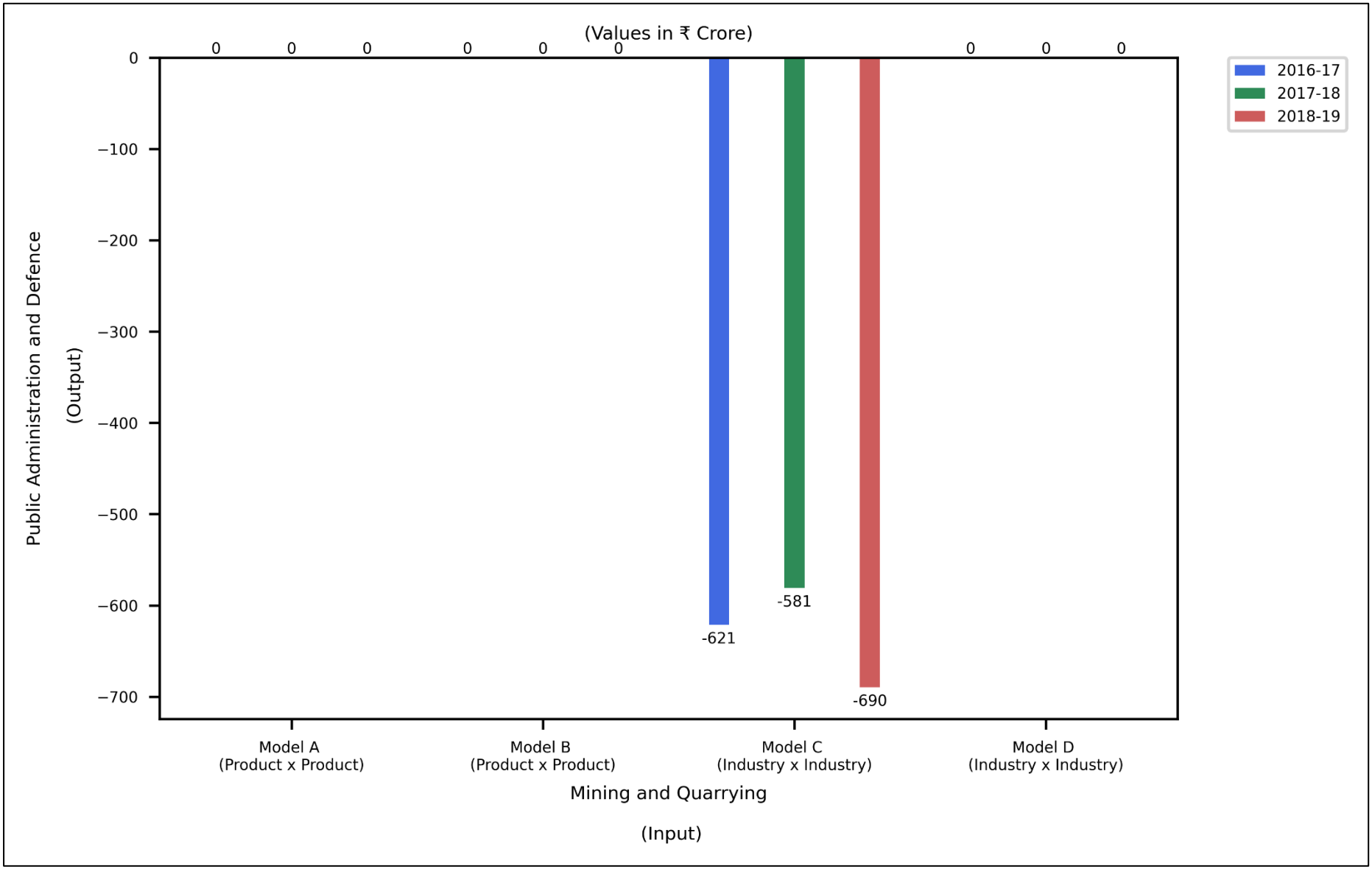
Gph 204 *– Mining and Quarrying (INPUT)* ***vs*** *Construction (OUTPUT)*



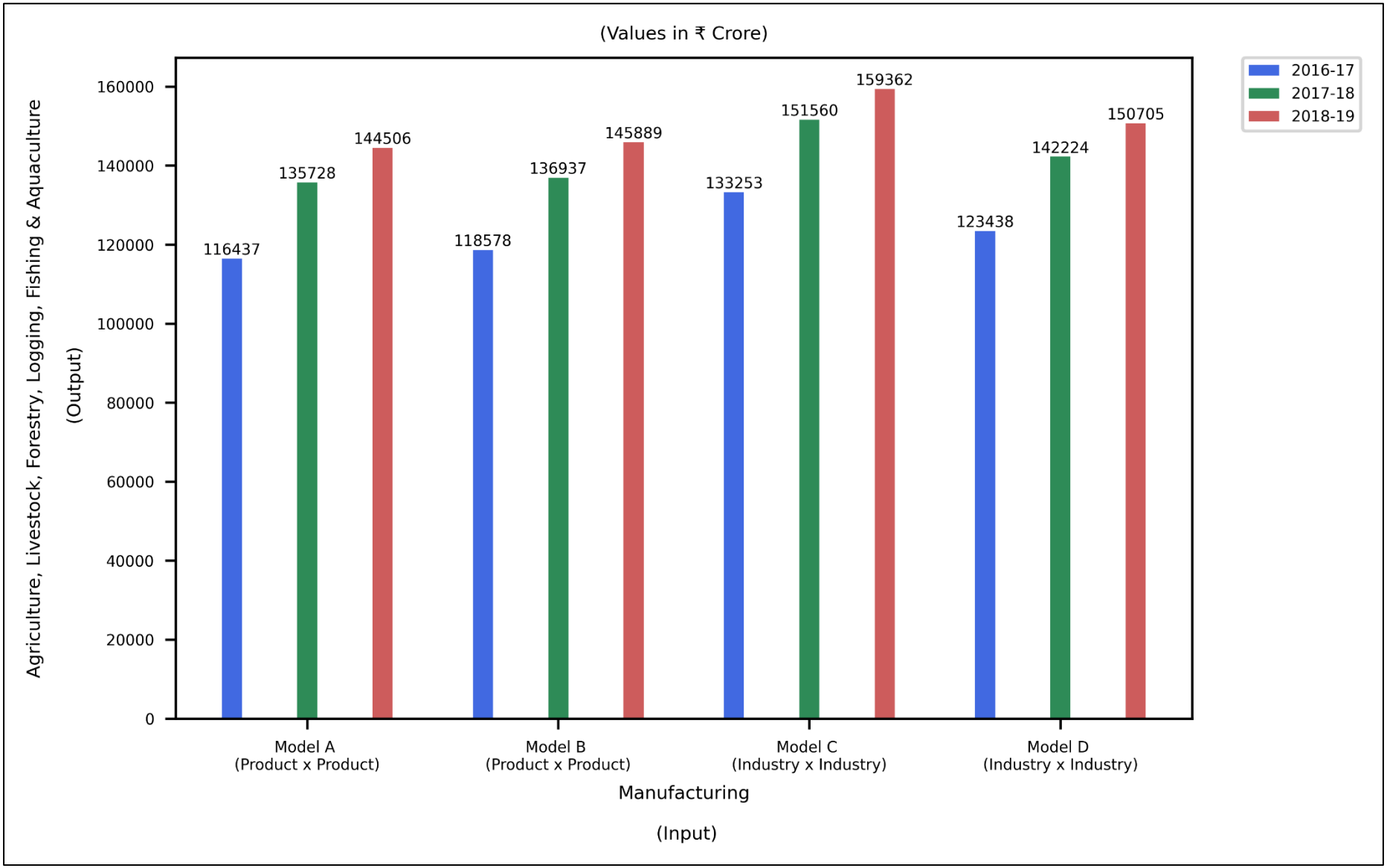
Gph 205 *– Mining and Quarrying (INPUT)* ***vs*** *Trade and Transportation (OUTPUT)*



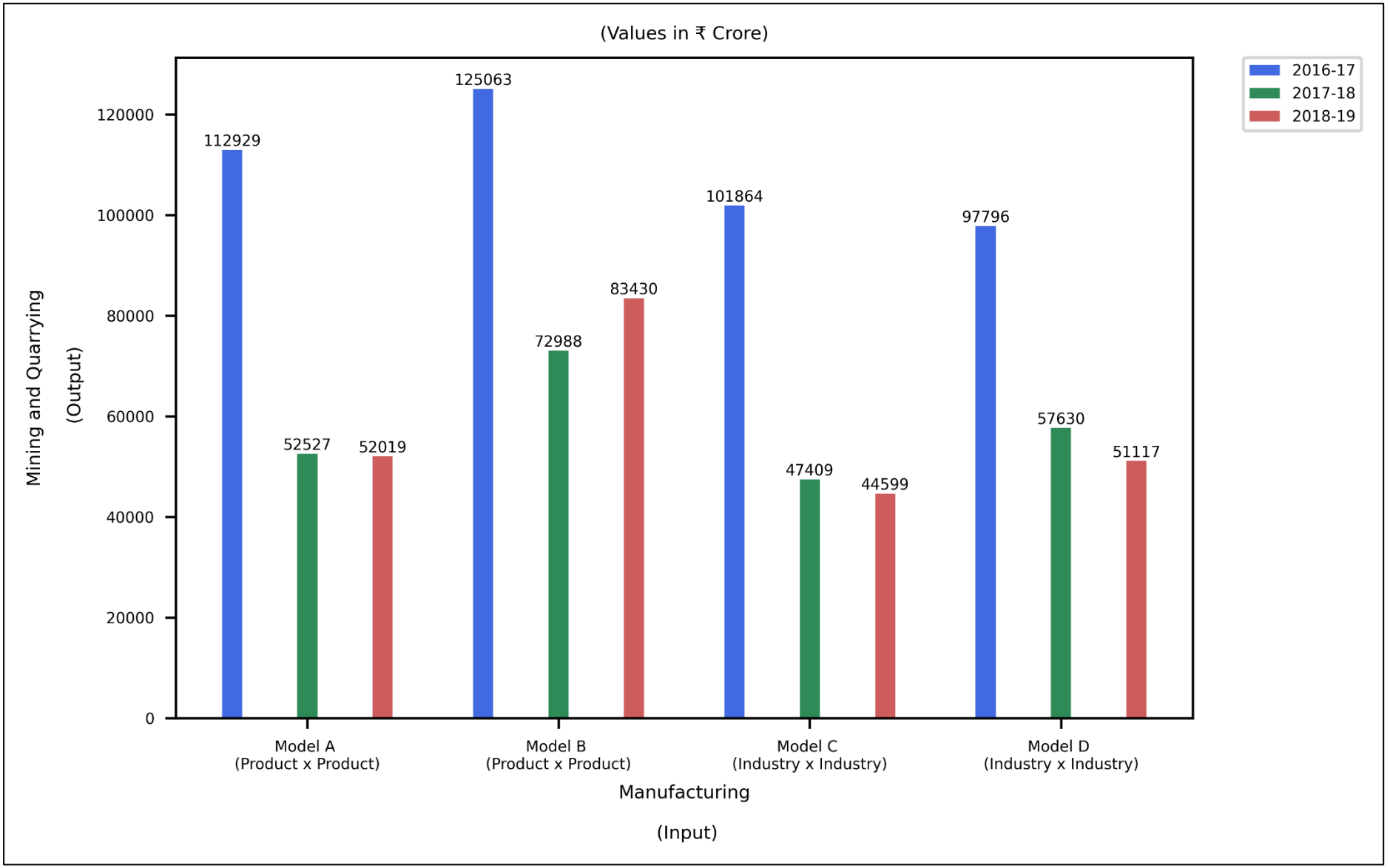
Gph 206 *– Mining and Quarrying (INPUT)* ***vs*** *Service Industries (OUTPUT)*



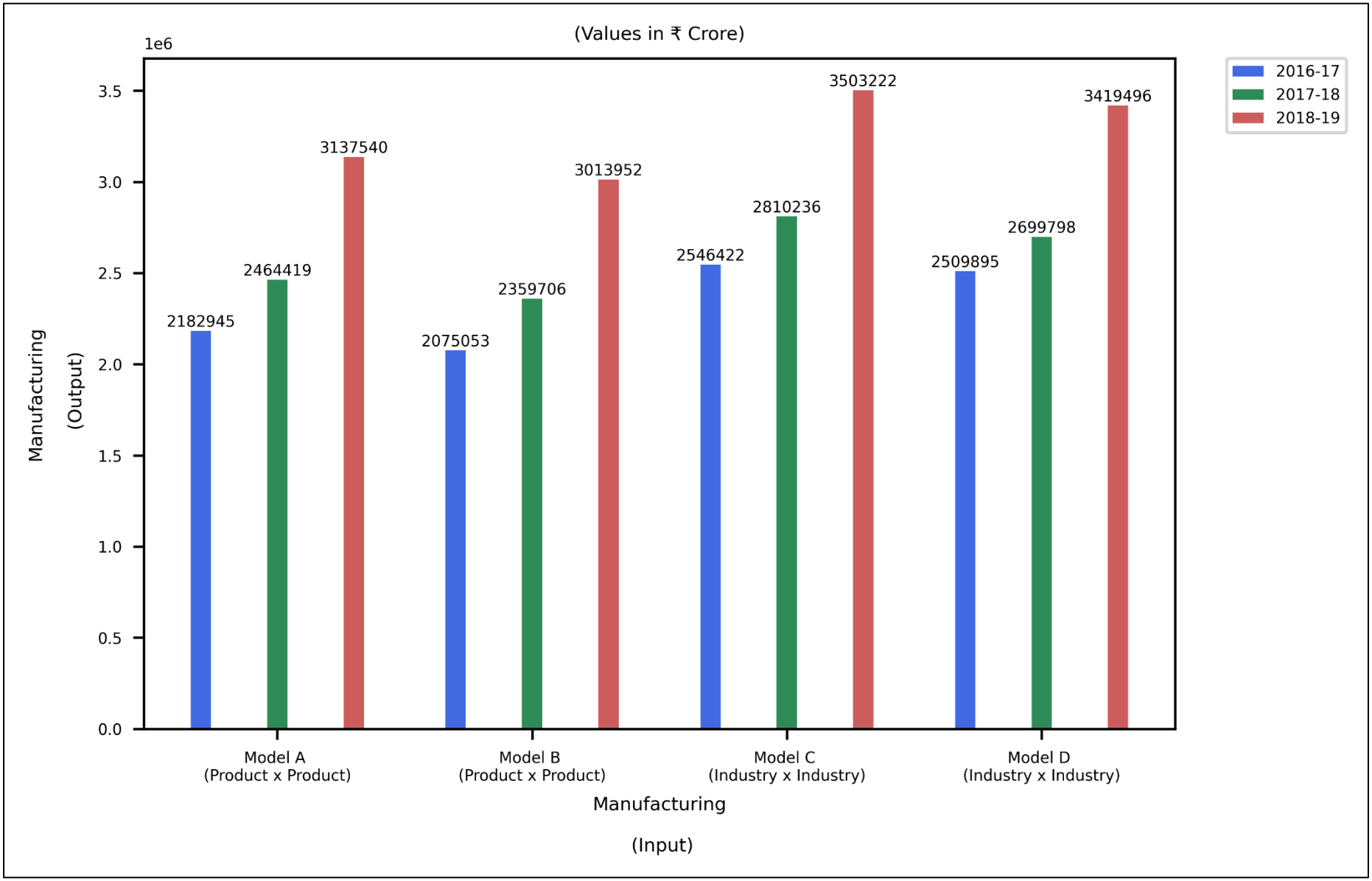
Gph 207 *– Mining and Quarrying (INPUT)* ***vs*** *Public Administration and Defence (OUTPUT)*



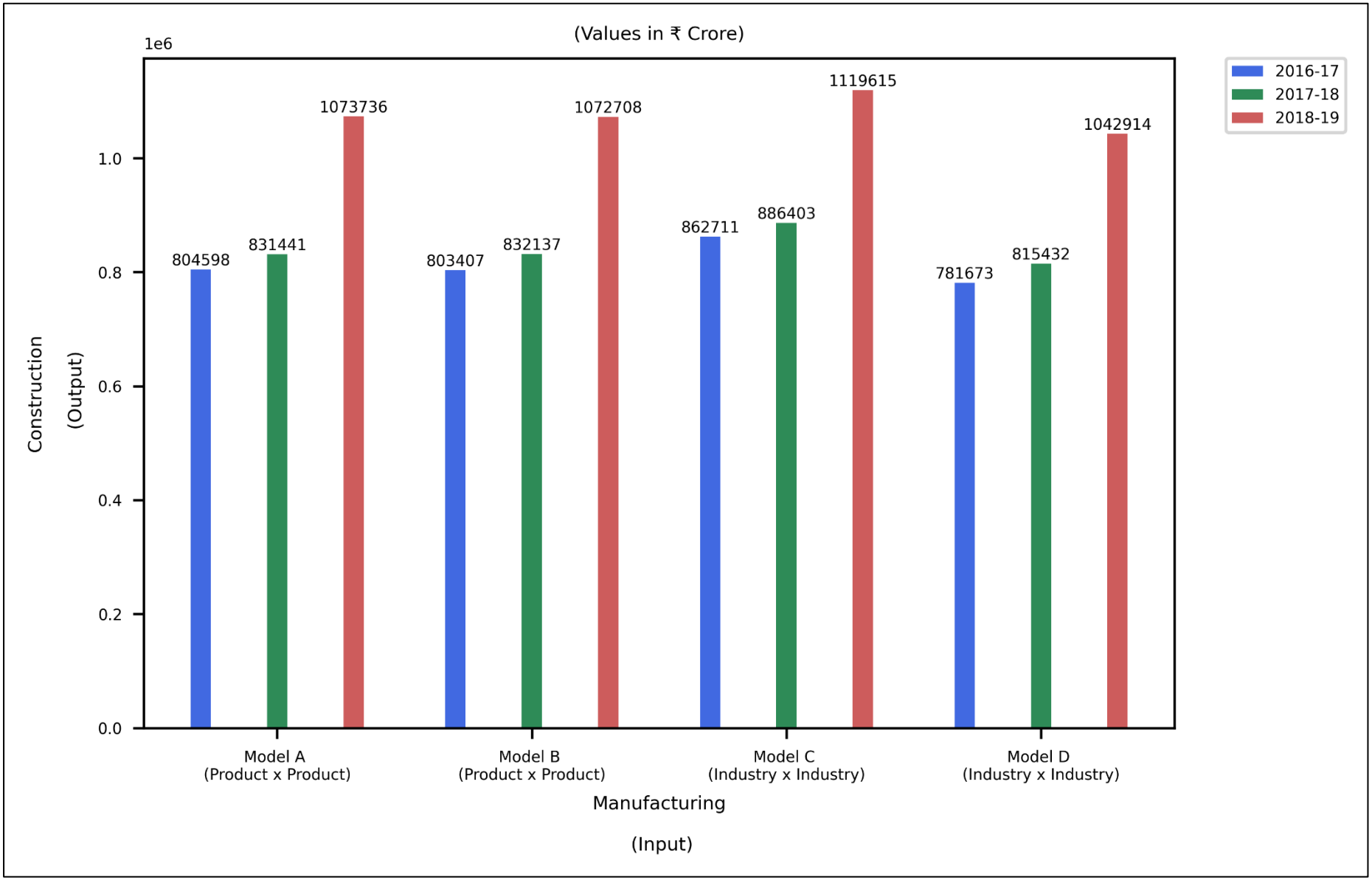
Gph 301 *- Manufacturing (INPUT)* ***vs*** *Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (OUTPUT)*



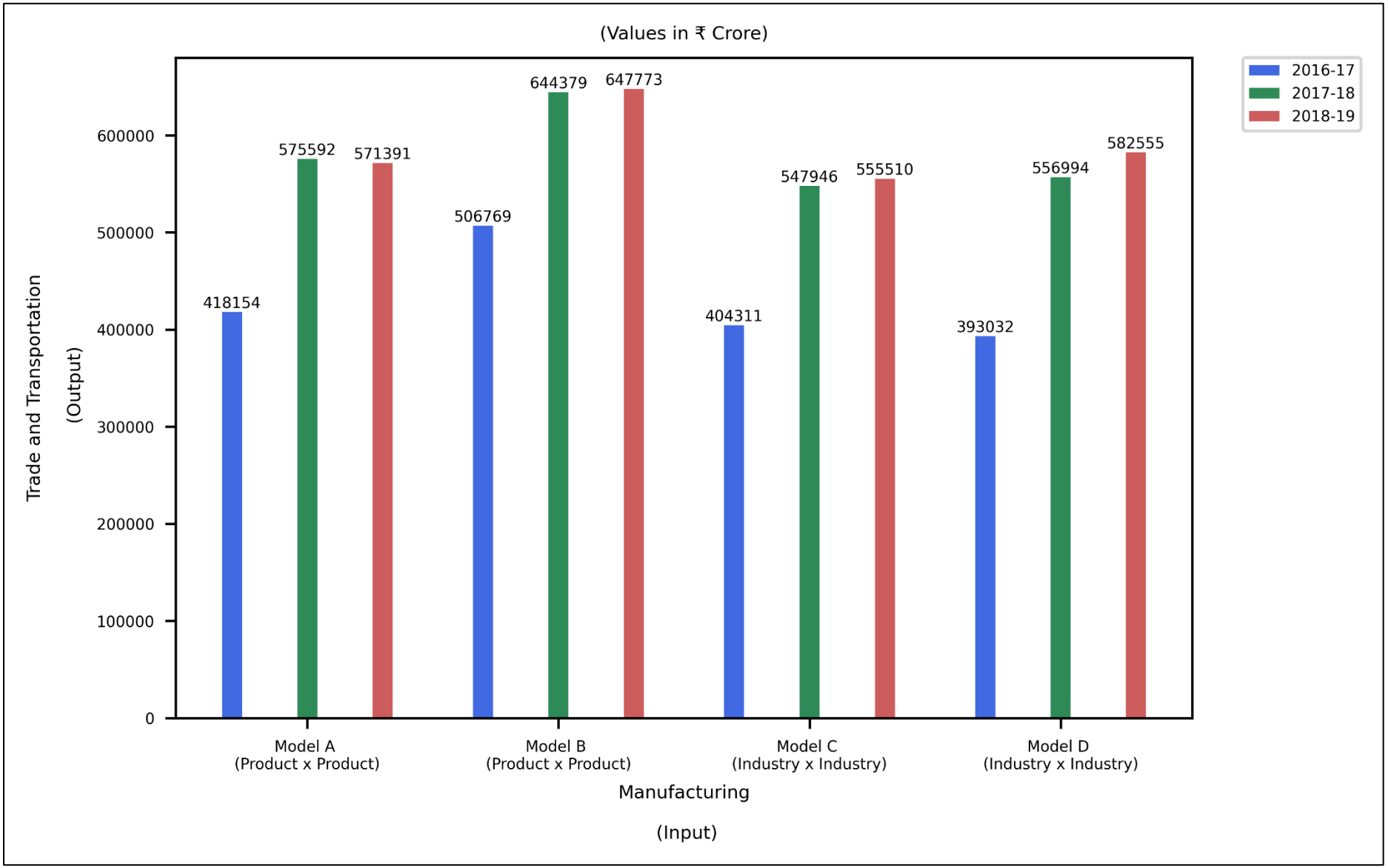
Gph 302 *– Manufacturing (INPUT)* ***vs*** *Mining and Quarrying (OUTPUT)*



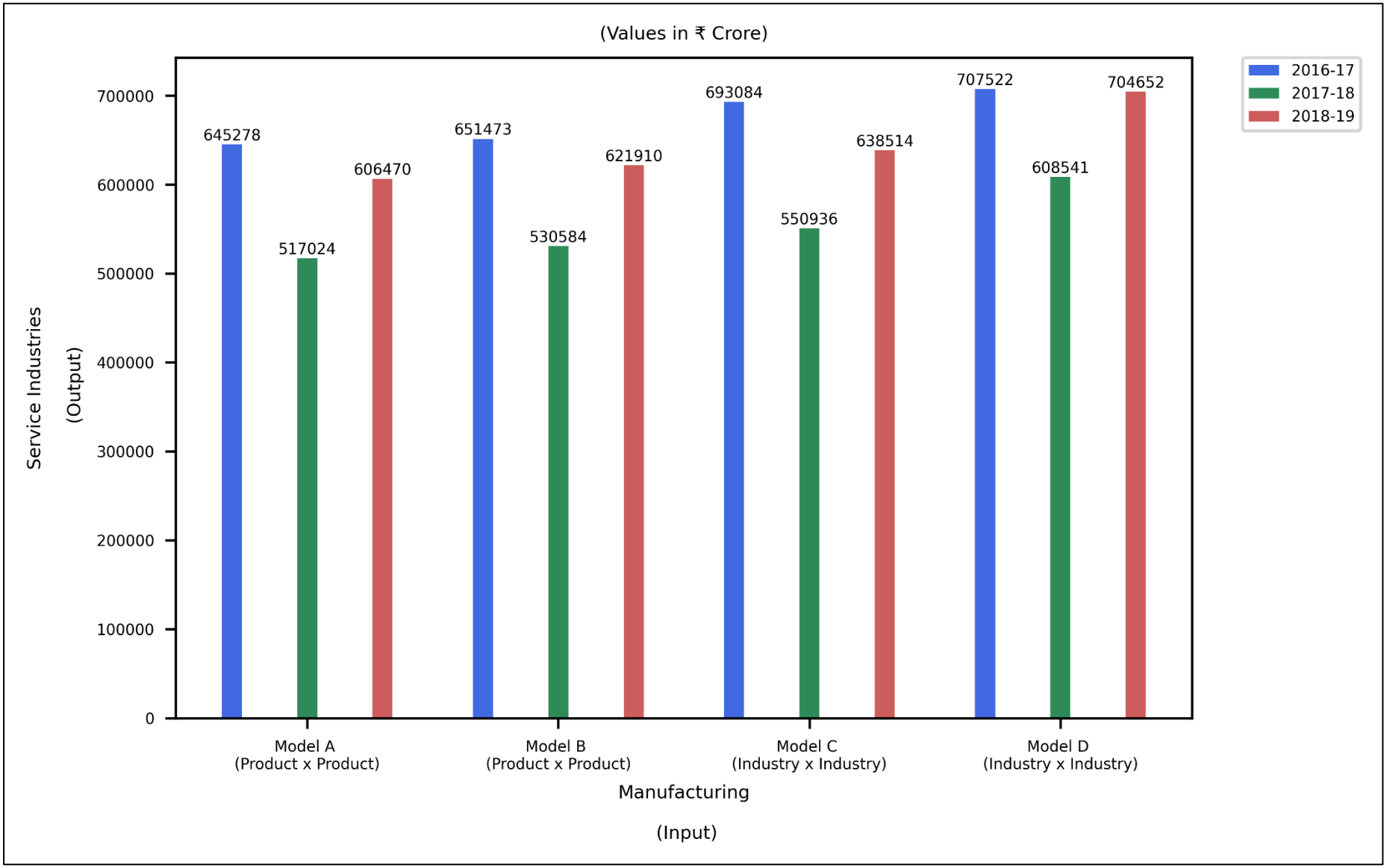
Gph 303 – *Manufacturing (INPUT)* ***vs*** *Manufacturing (OUTPUT)*



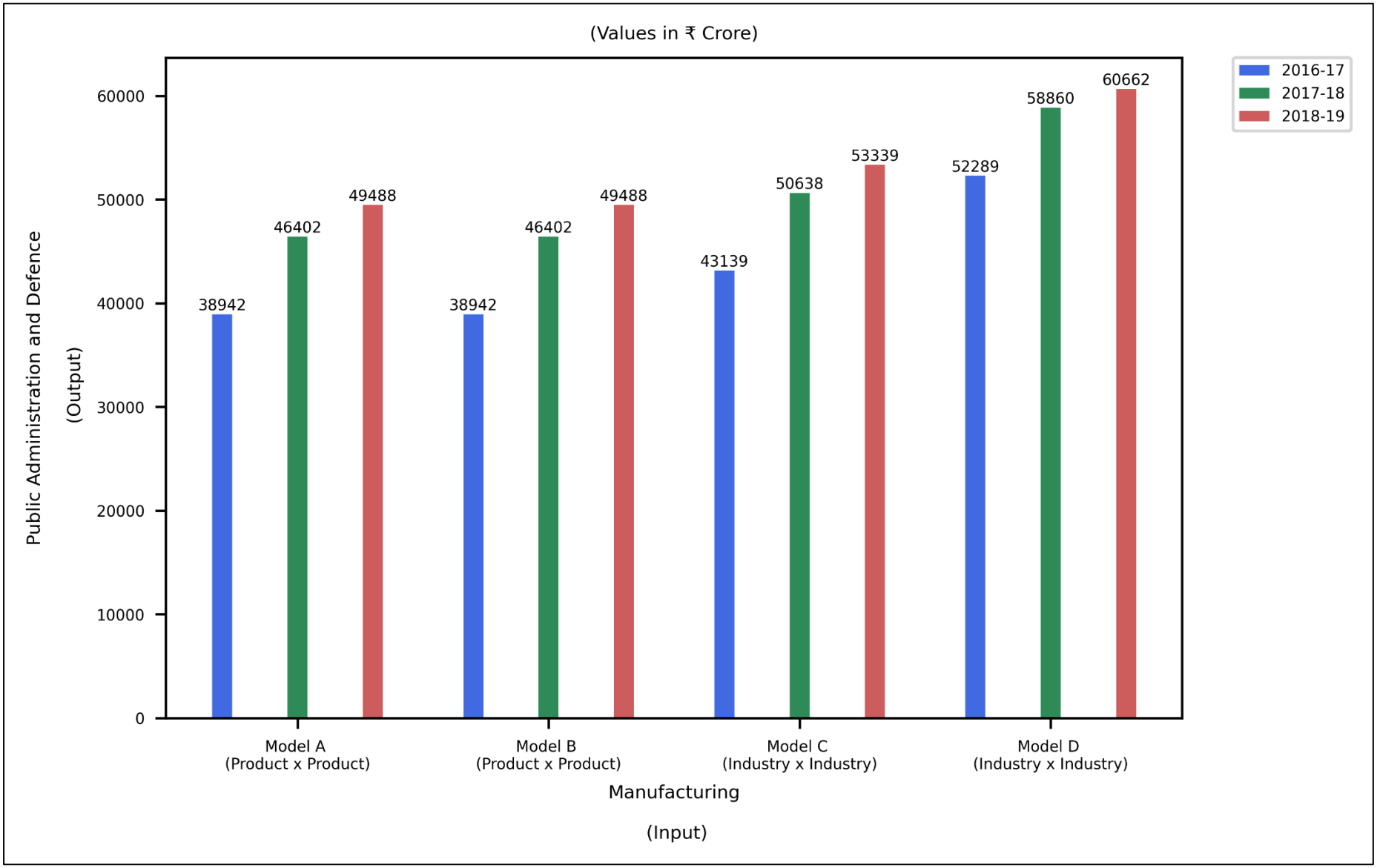
Gph 304 *– Manufacturing (INPUT)* ***vs*** *Construction (OUTPUT)*



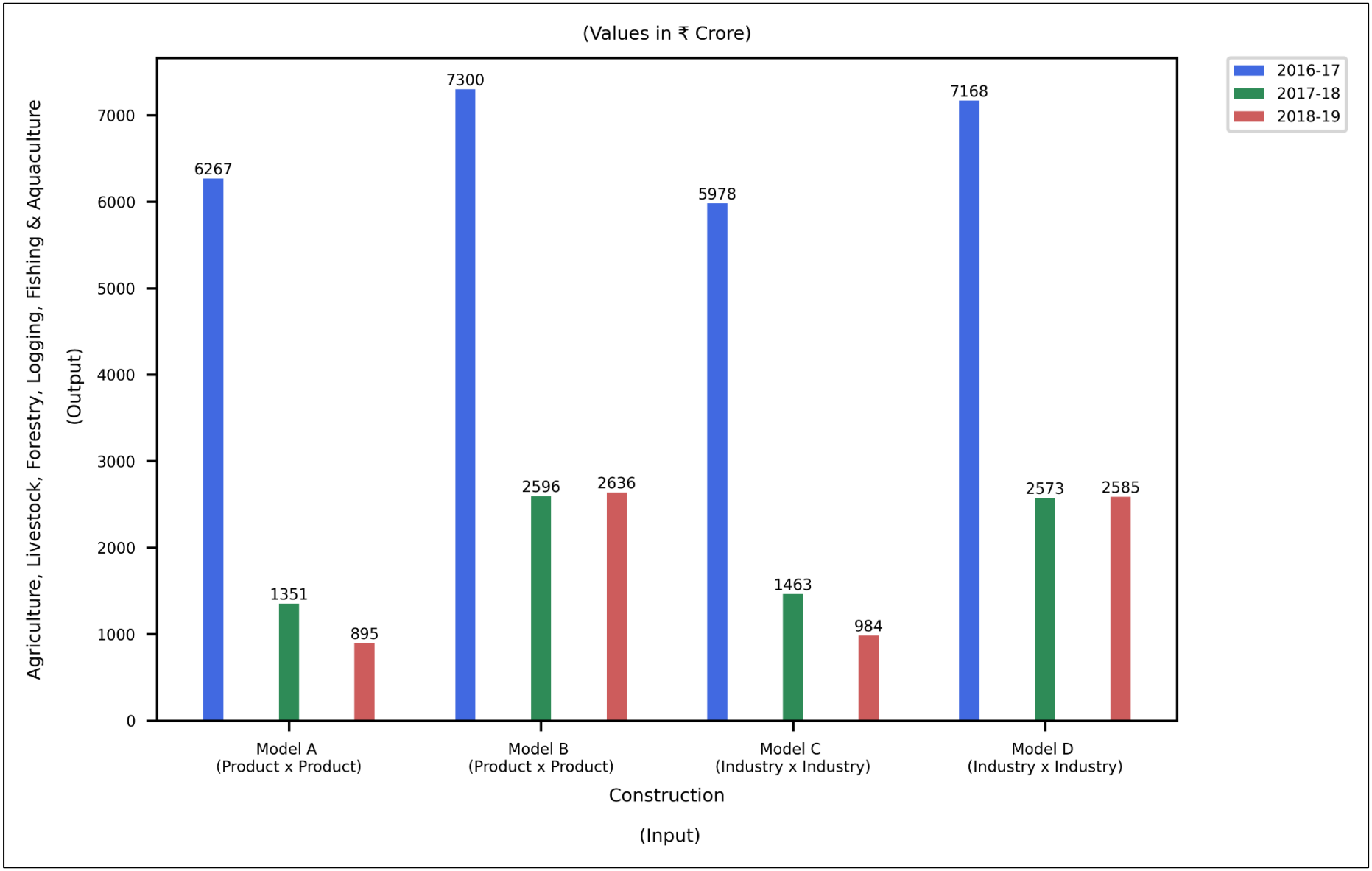
Gph 305 *- Manufacturing (INPUT)* ***vs*** *Trade and Transportation (OUTPUT)*



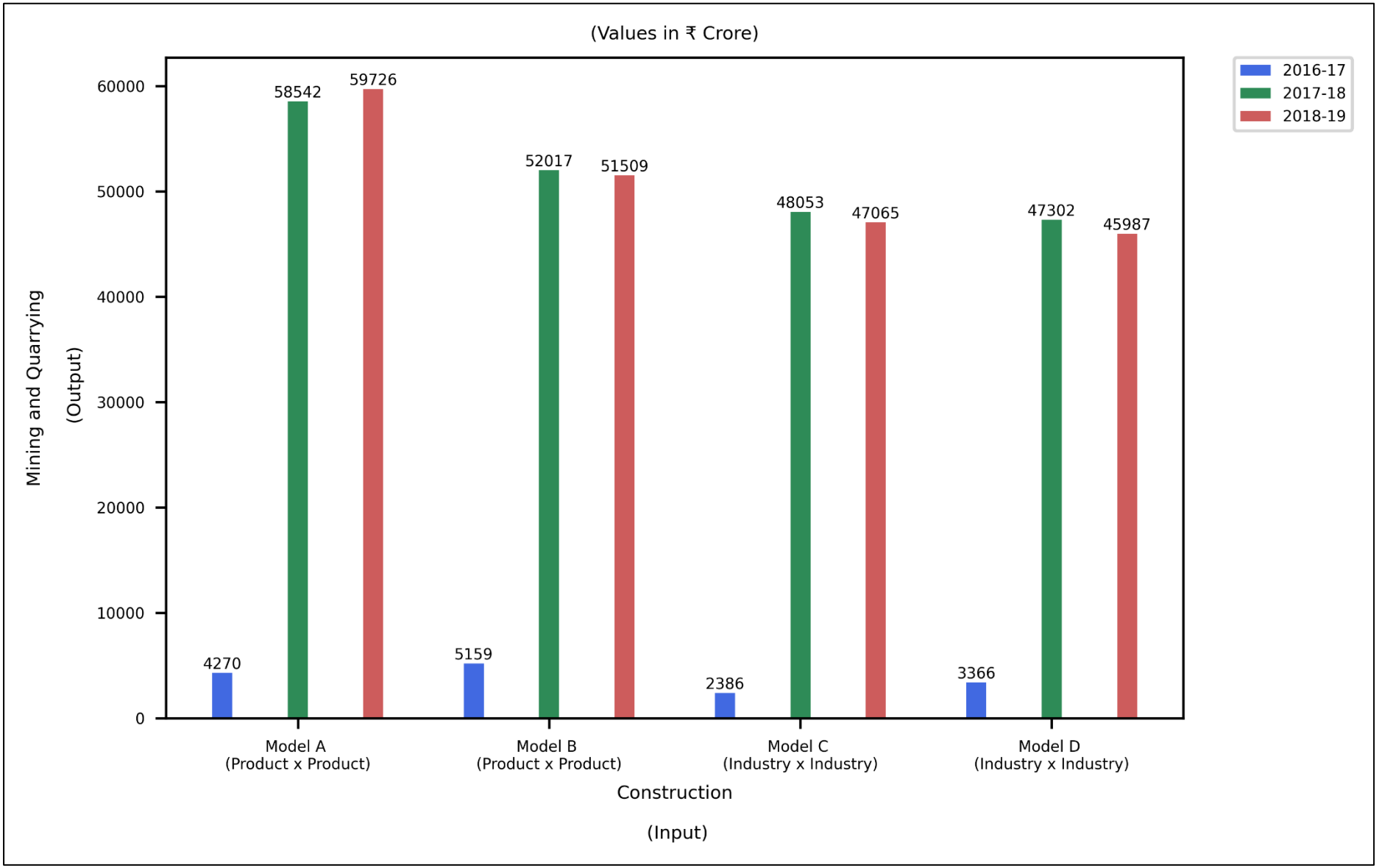
Gph 306 *– Manufacturing (INPUT)* ***vs*** *Service Industries (OUTPUT)*



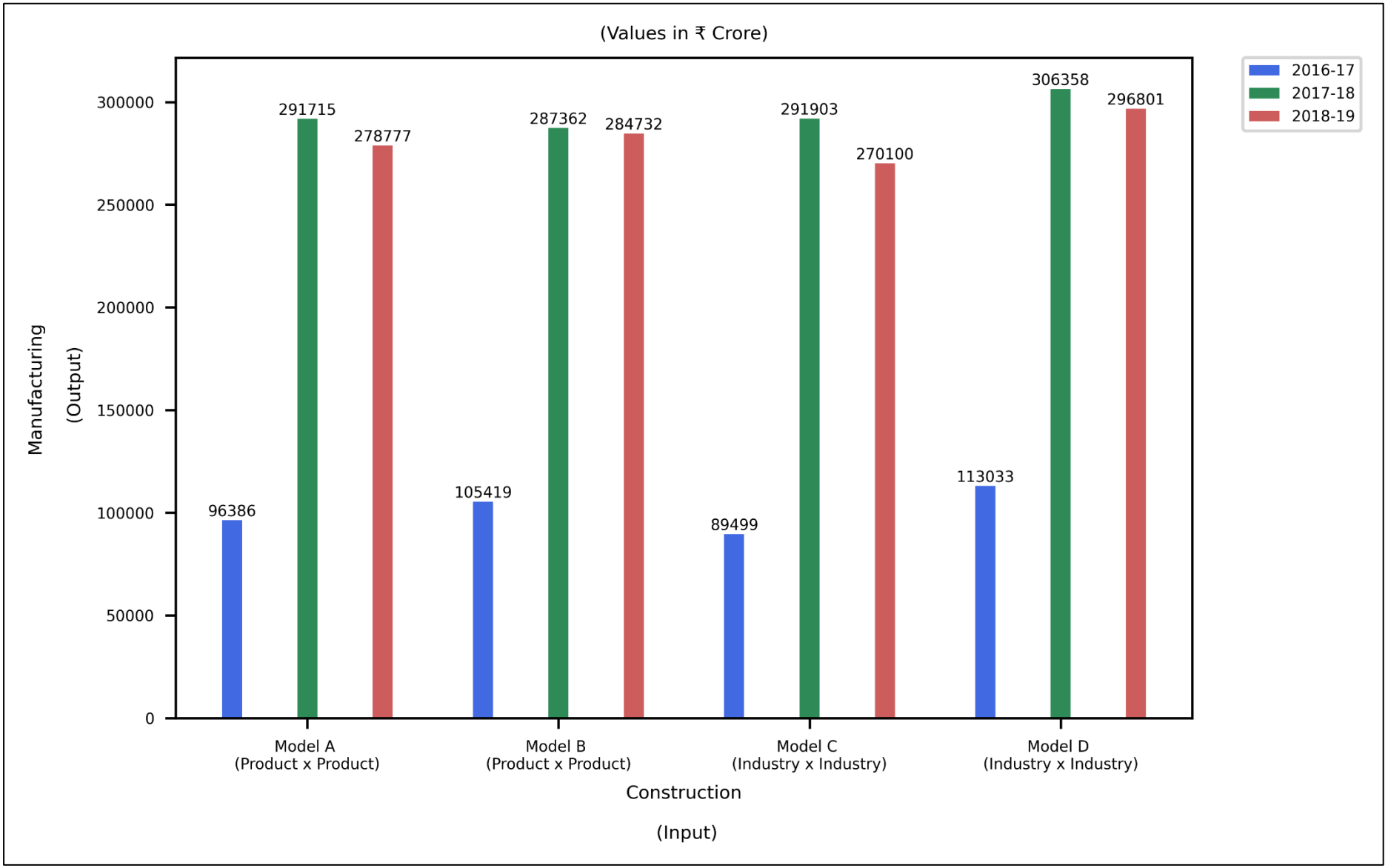
Gph 307 *– Manufacturing (INPUT)* ***vs*** *Public Administration and Defence (OUTPUT)*



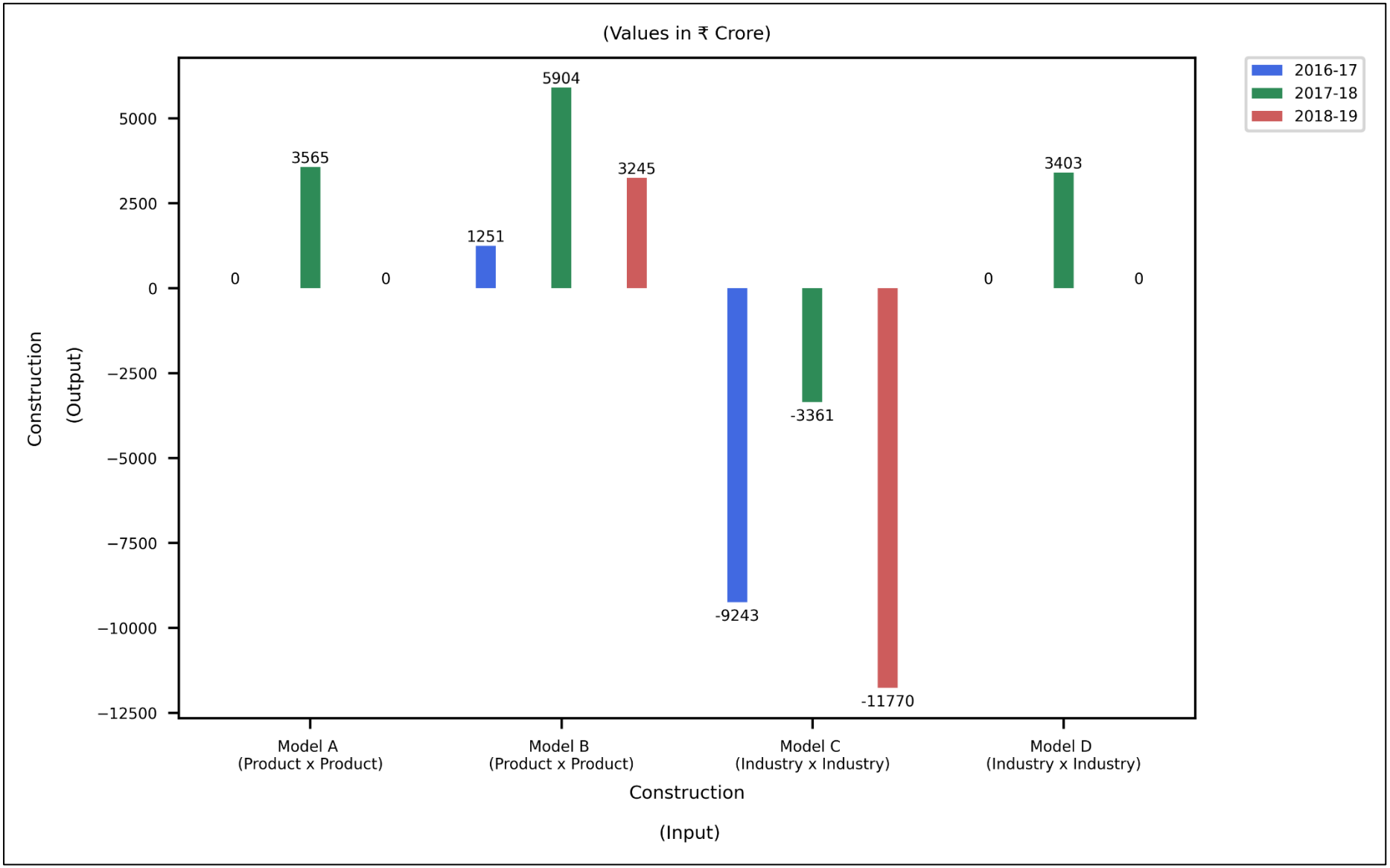
Gph 401 – *Construction (INPUT)* ***vs*** *Agriculture, Livestock, Forestry, Logging, Fishing & Aquaculture (OUTPUT)*



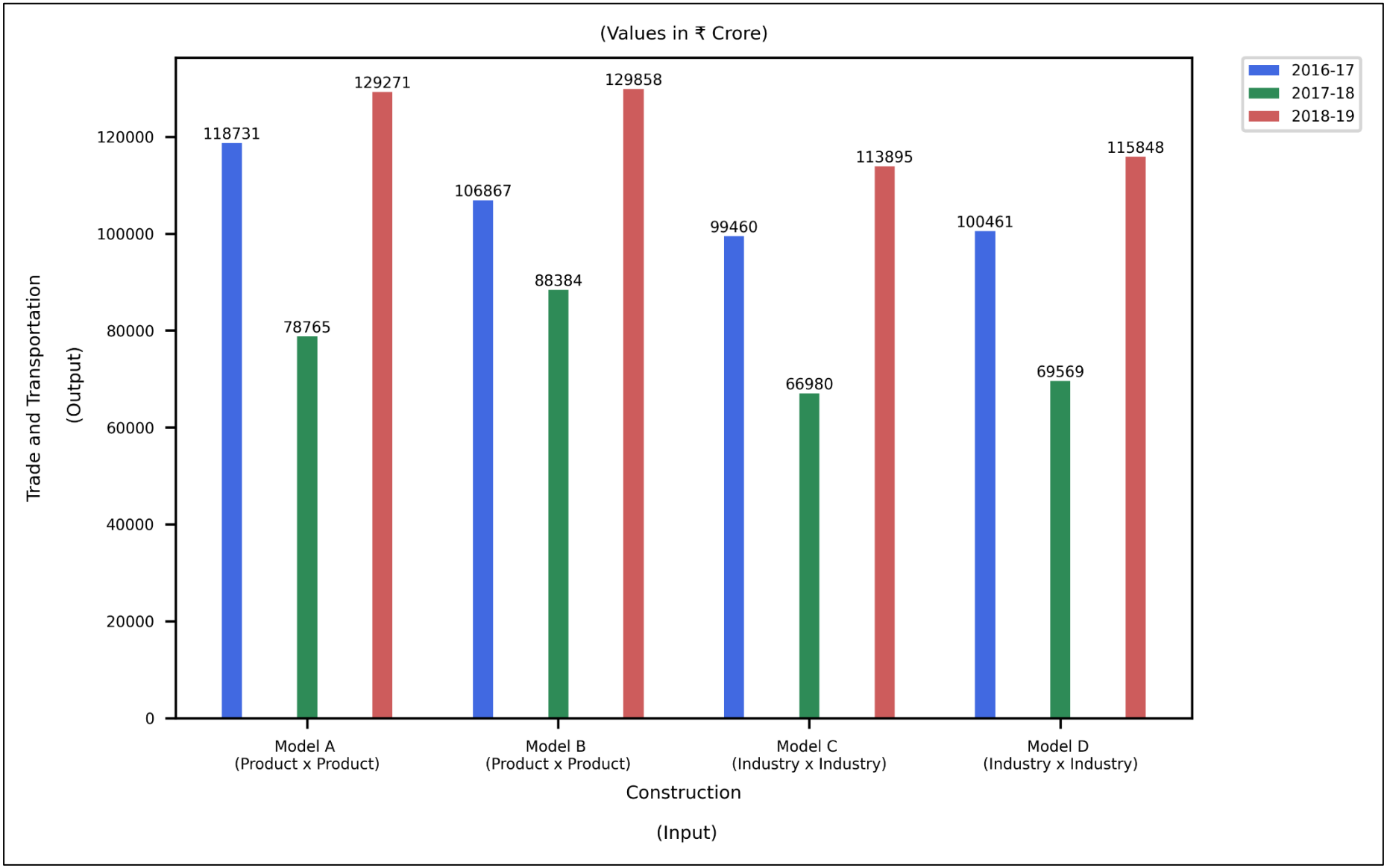
Gph 402 – *Construction (INPUT)* ***vs*** *Mining and Quarrying (OUTPUT)*



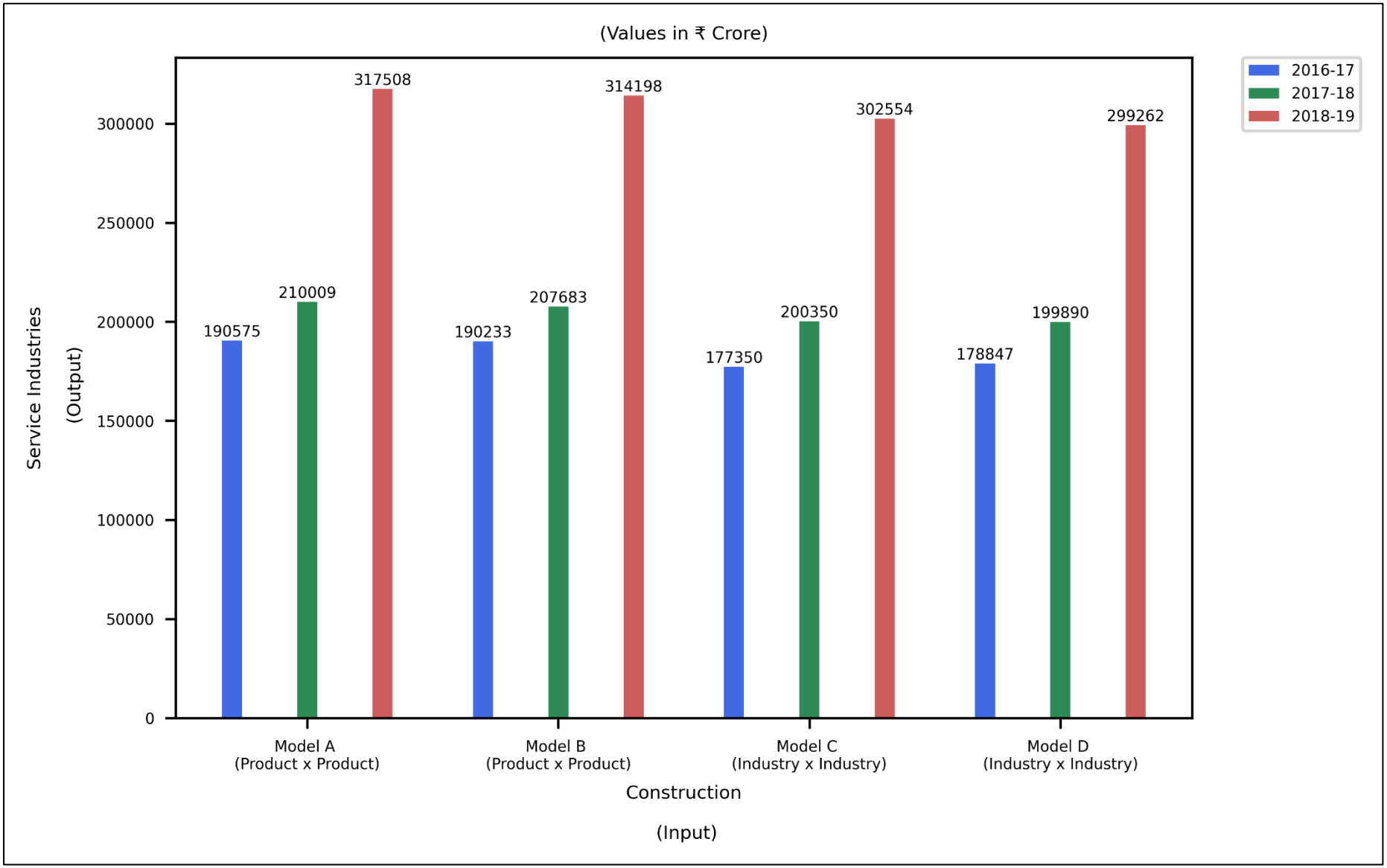
Gph 403 – *Construction (INPUT)* ***vs*** *Manufacturing (OUTPUT)*



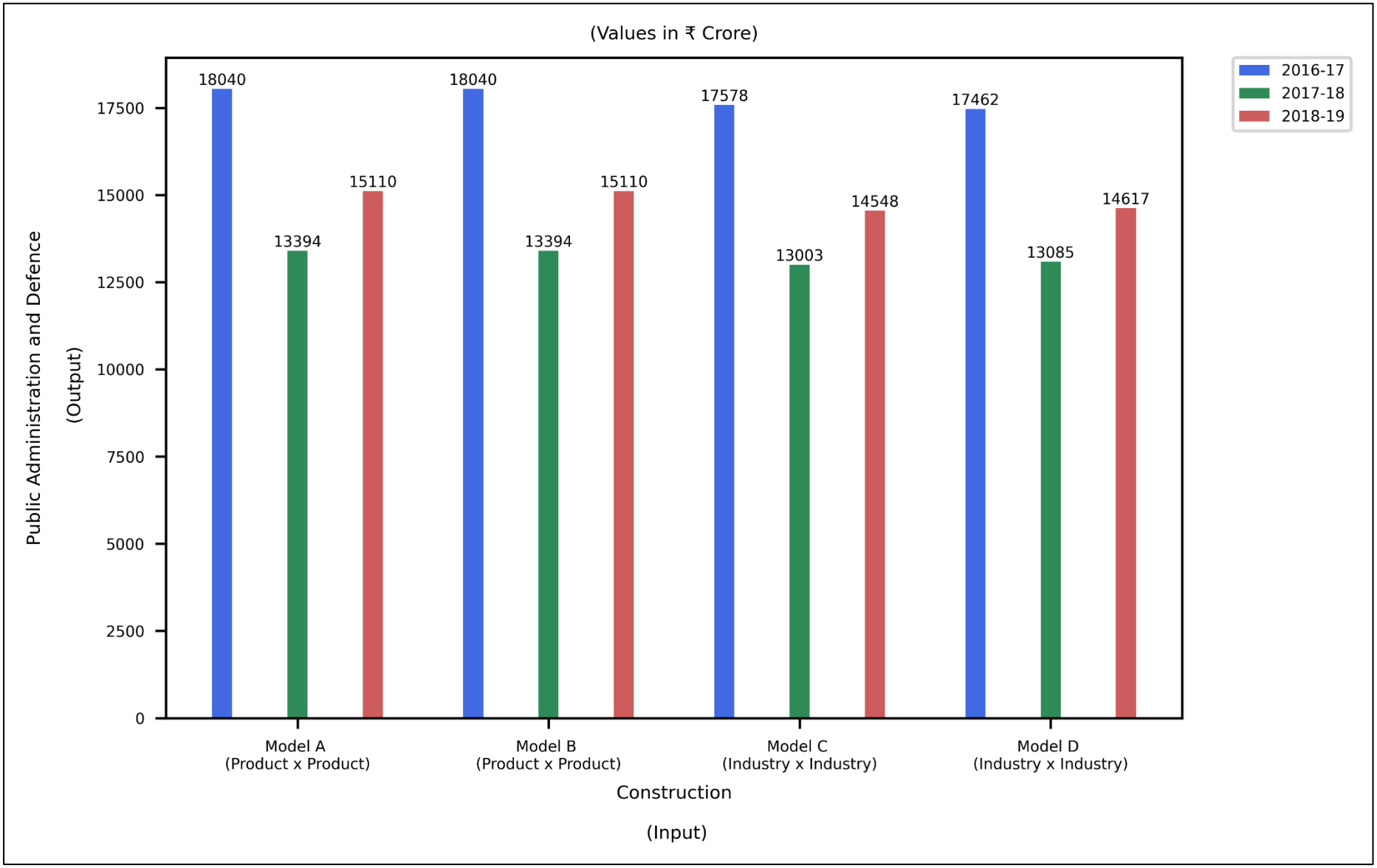
Gph 404 – *Construction (INPUT)* ***vs*** *Construction (OUTPUT)*



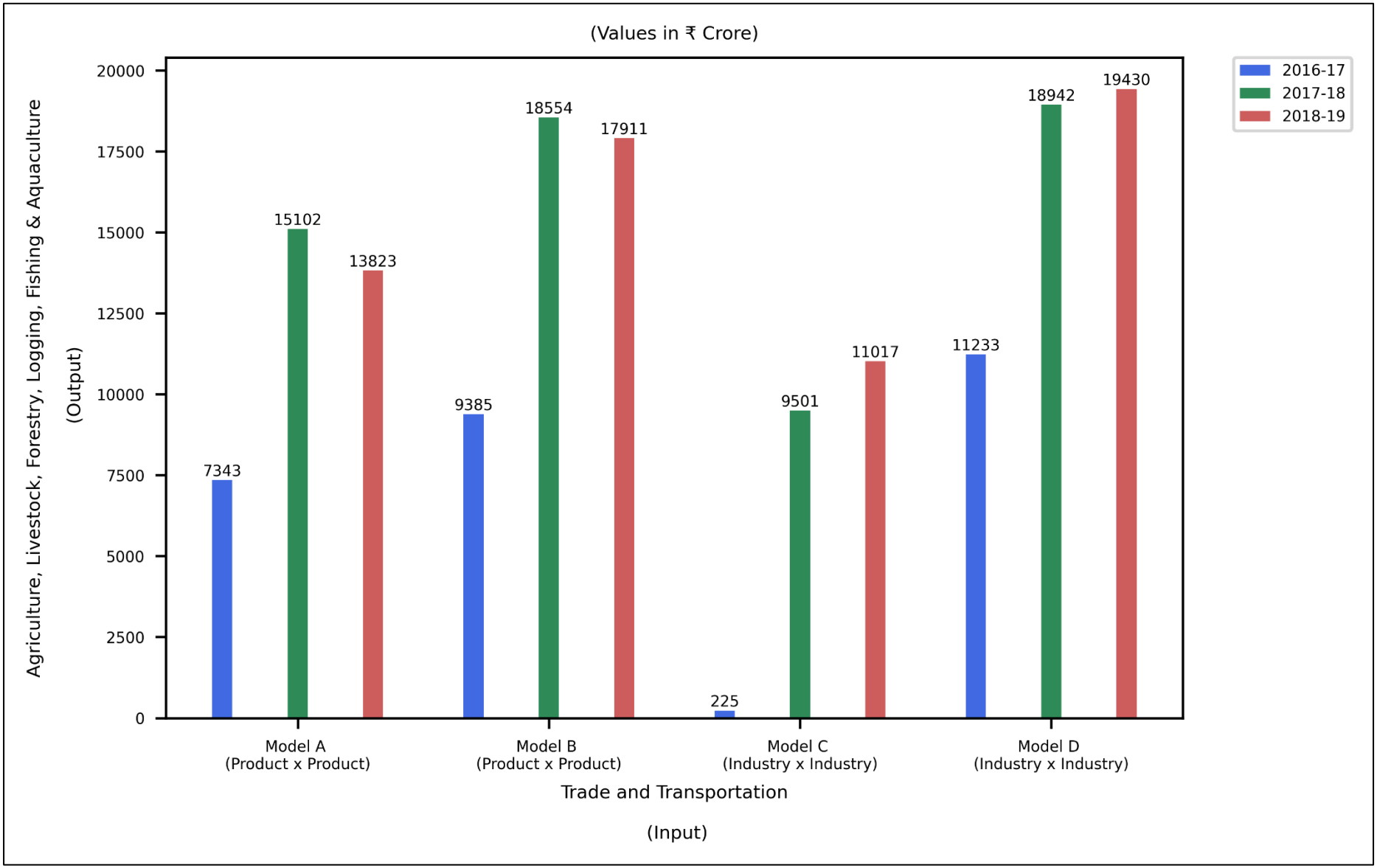
Gph 405 – *Construction (INPUT)* ***vs*** *Trade and Transportation (OUTPUT)*



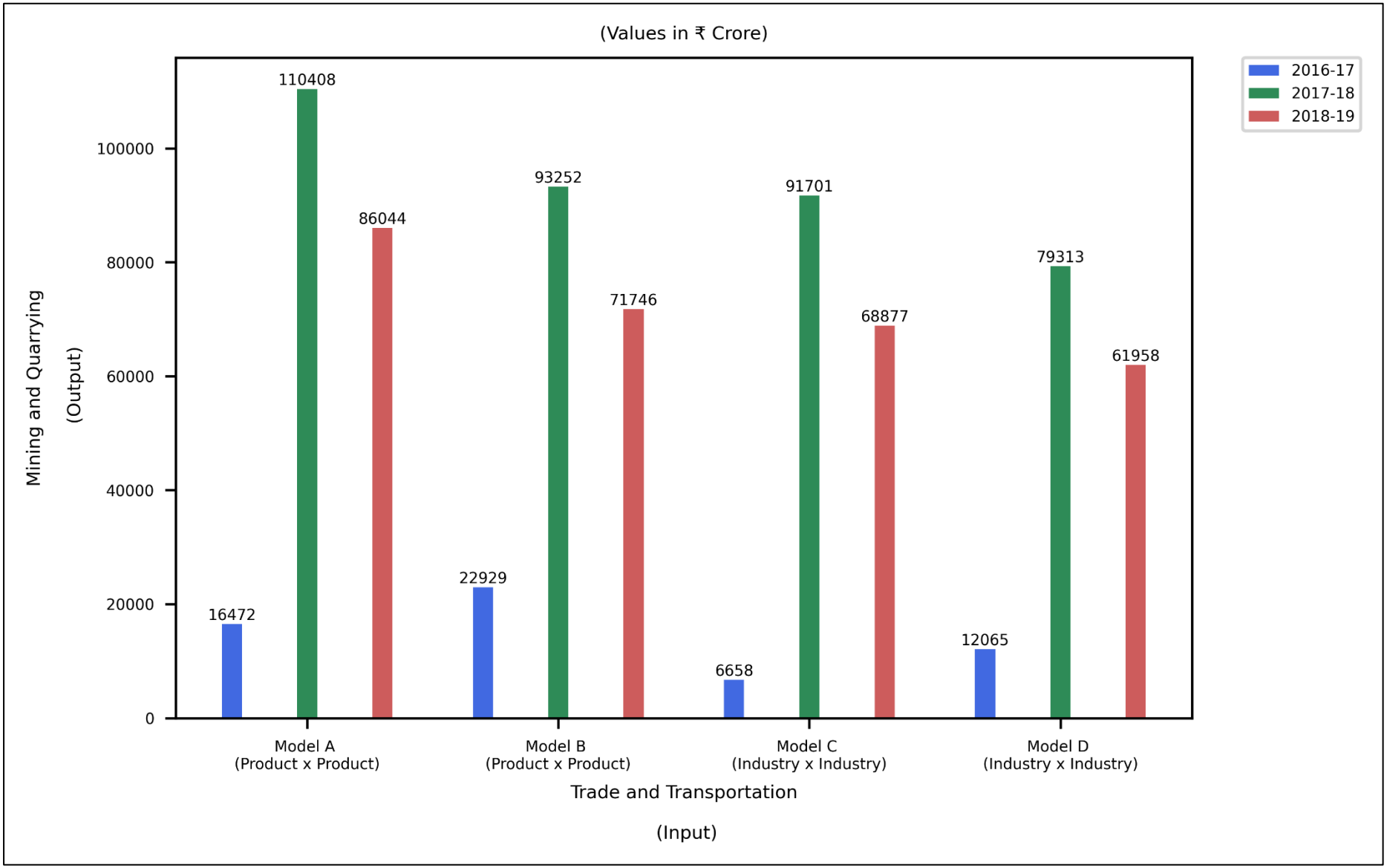
Gph 406 – *Construction (INPUT)* ***vs*** *Service Industries (OUTPUT)*



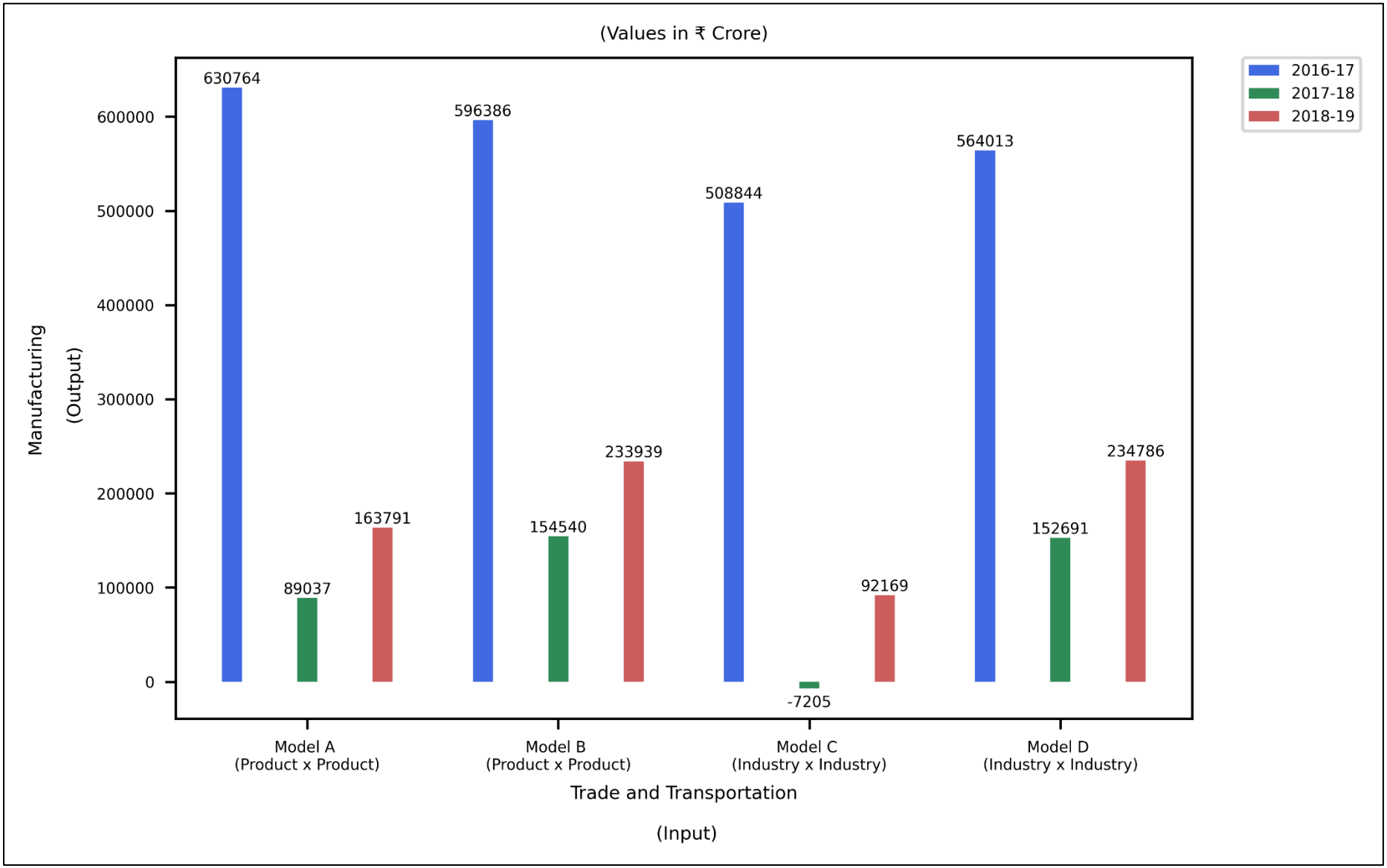
Gph 407 – *Construction (INPUT)* ***vs*** *Public Administration and Defence (OUTPUT)*



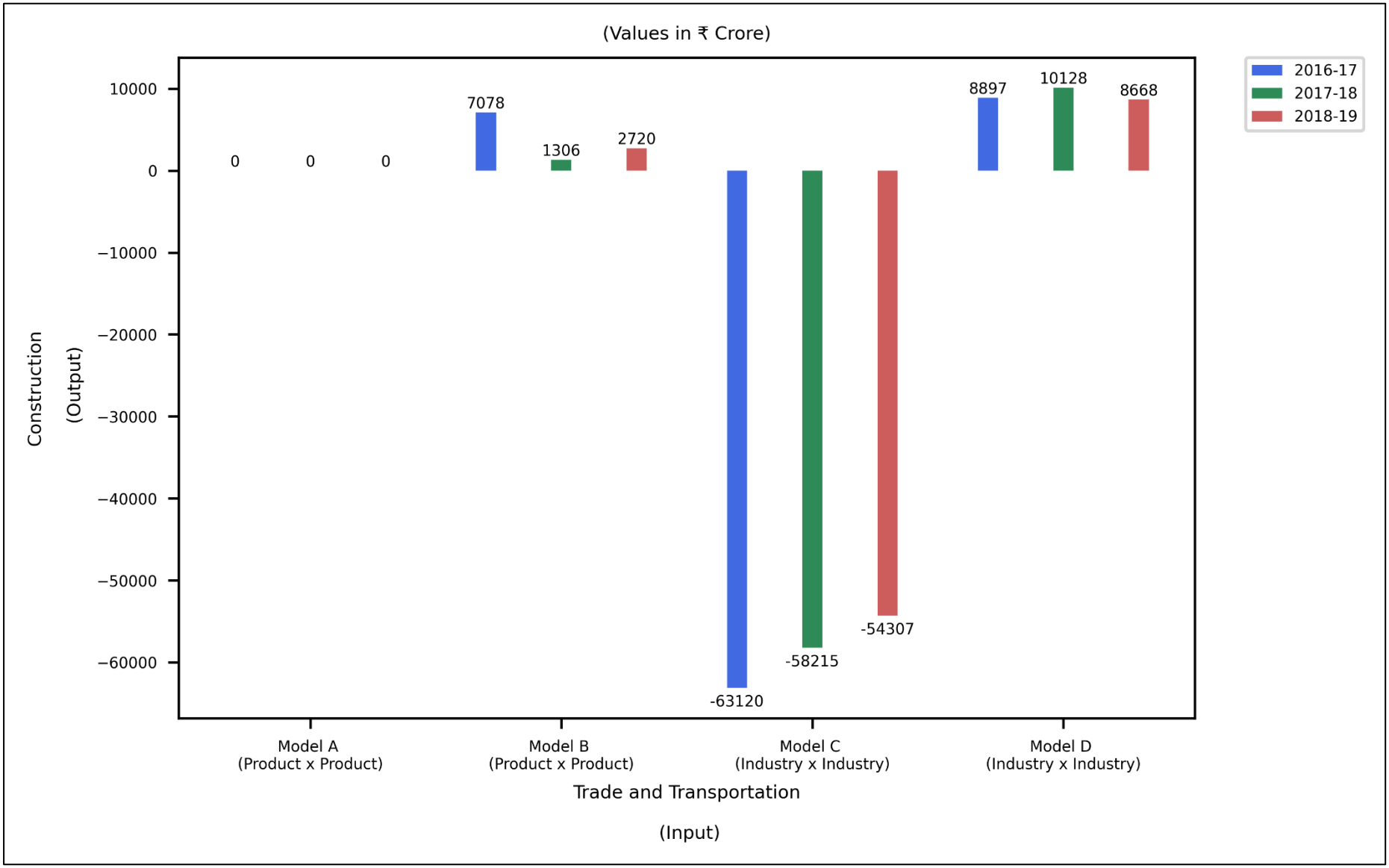
Gph 501 – *Trade and Transportation (INPUT)* ***vs*** *Agriculture, Livestock, Forestry, Logging, Fishing, & Aquaculture (OUTPUT)*



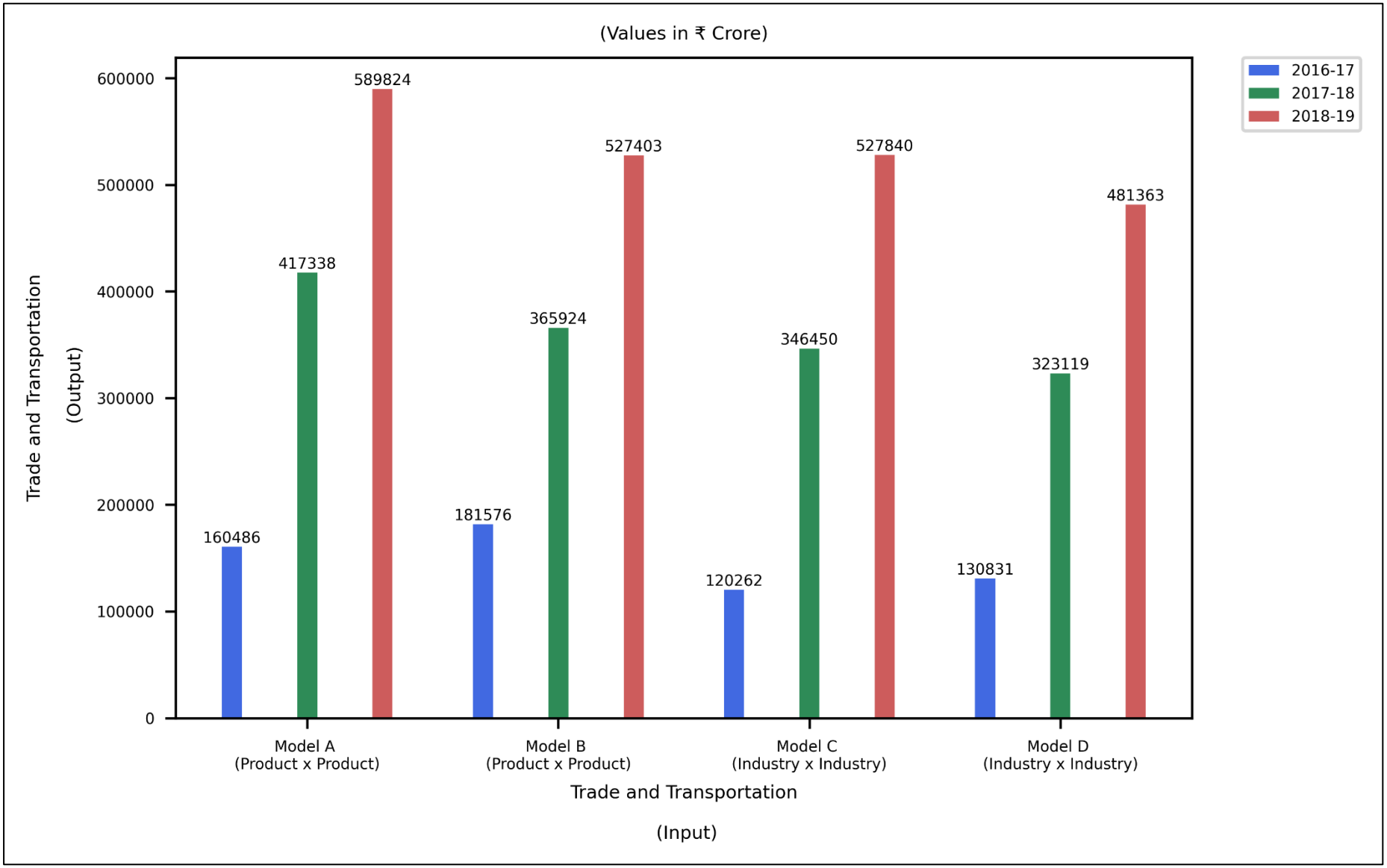
Gph 502 – *Trade and Transportation (INPUT)* ***vs*** *Mining and Quarrying (OUTPUT)*



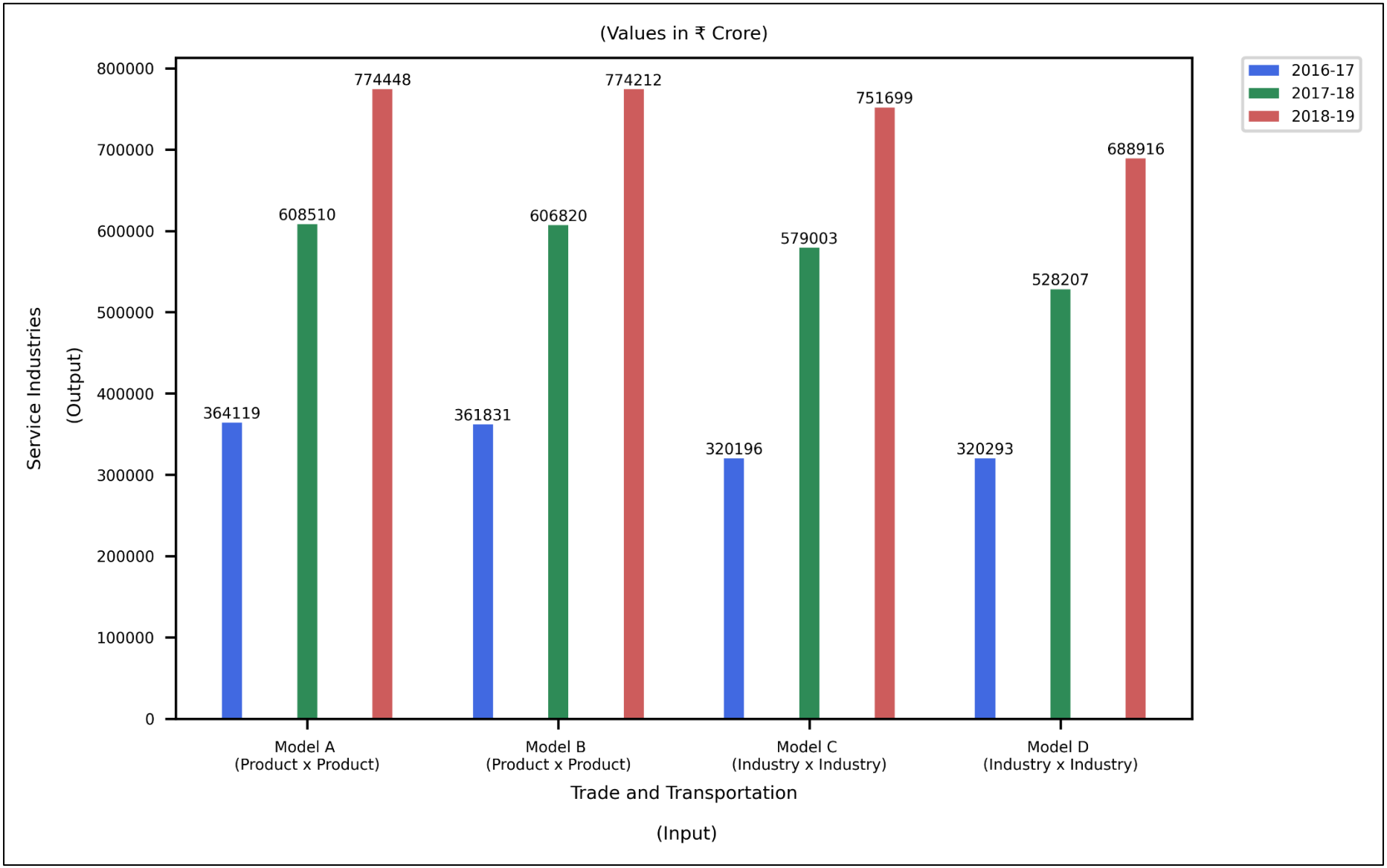
Gph 503 – *Trade and Transportation (INPUT)* ***vs*** *Manufacturing (OUTPUT)*



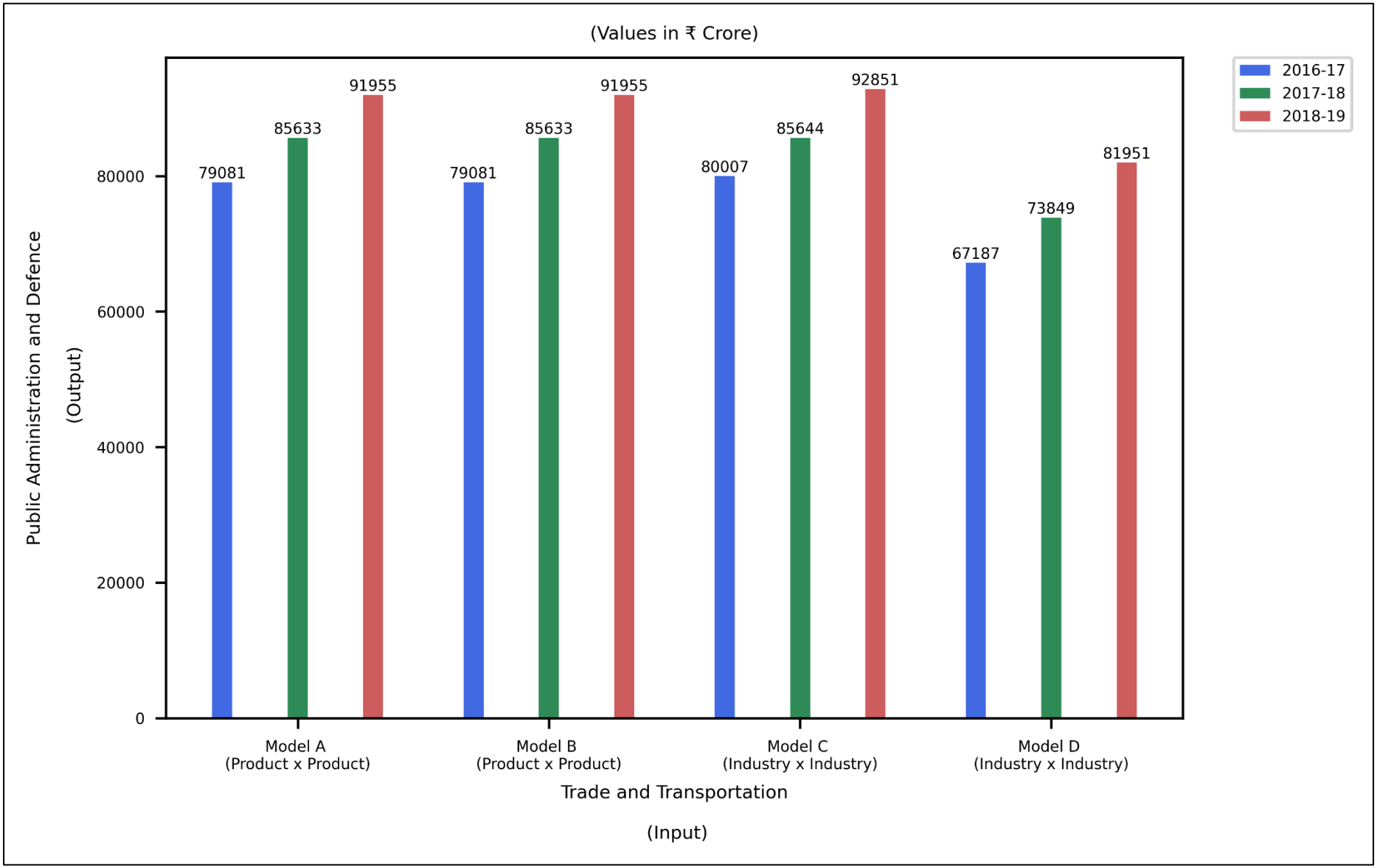
Gph 504 *– Trade and Transportation (INPUT)* ***vs*** *Construction (OUTPUT)*



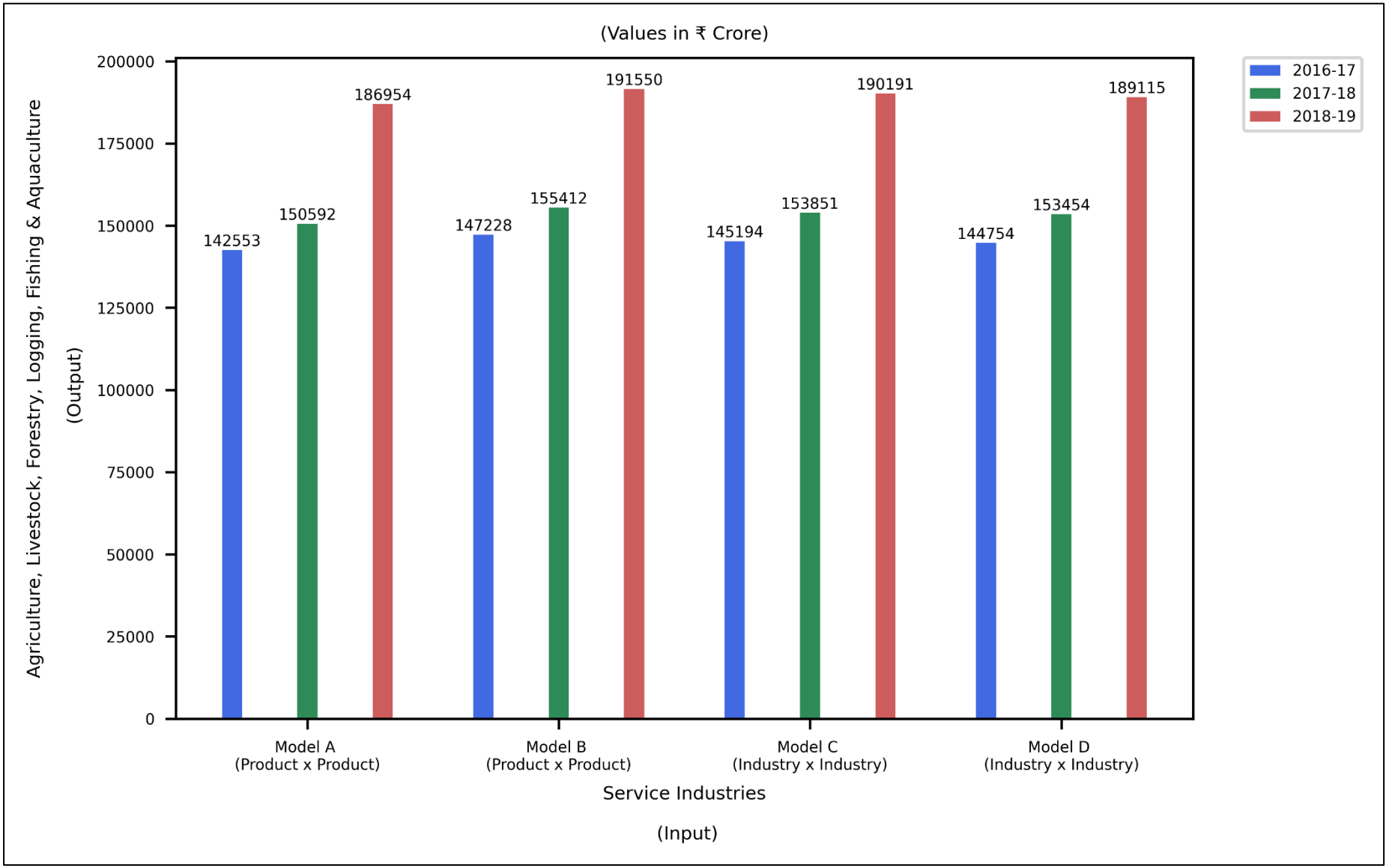
Gph 505 *– Trade and Transportation (INPUT)* ***vs*** *Trade and Transportation (OUTPUT)*



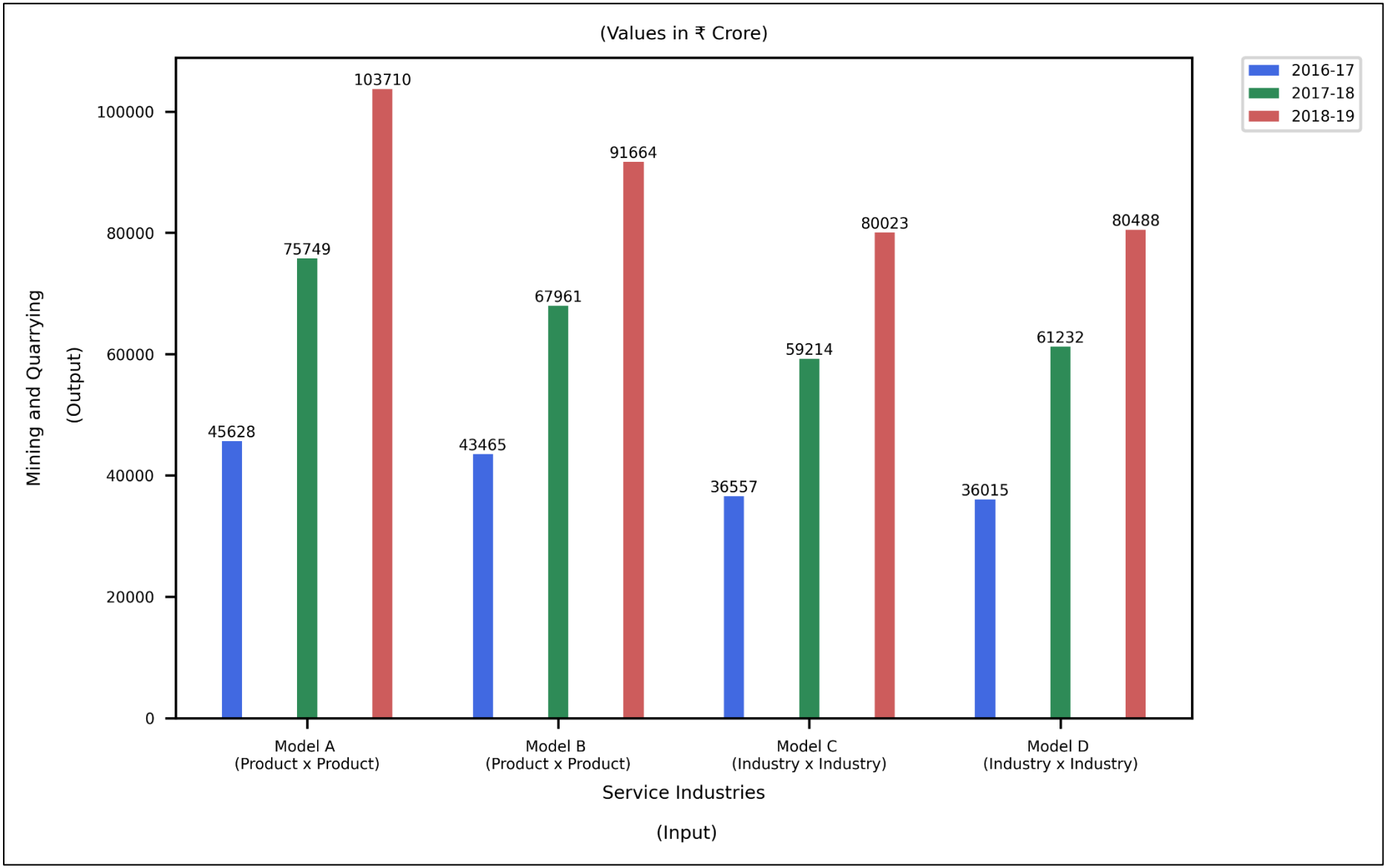
Gph 506 *– Trade and Transportation (INPUT)* ***vs*** *Service Industries (OUTPUT)*



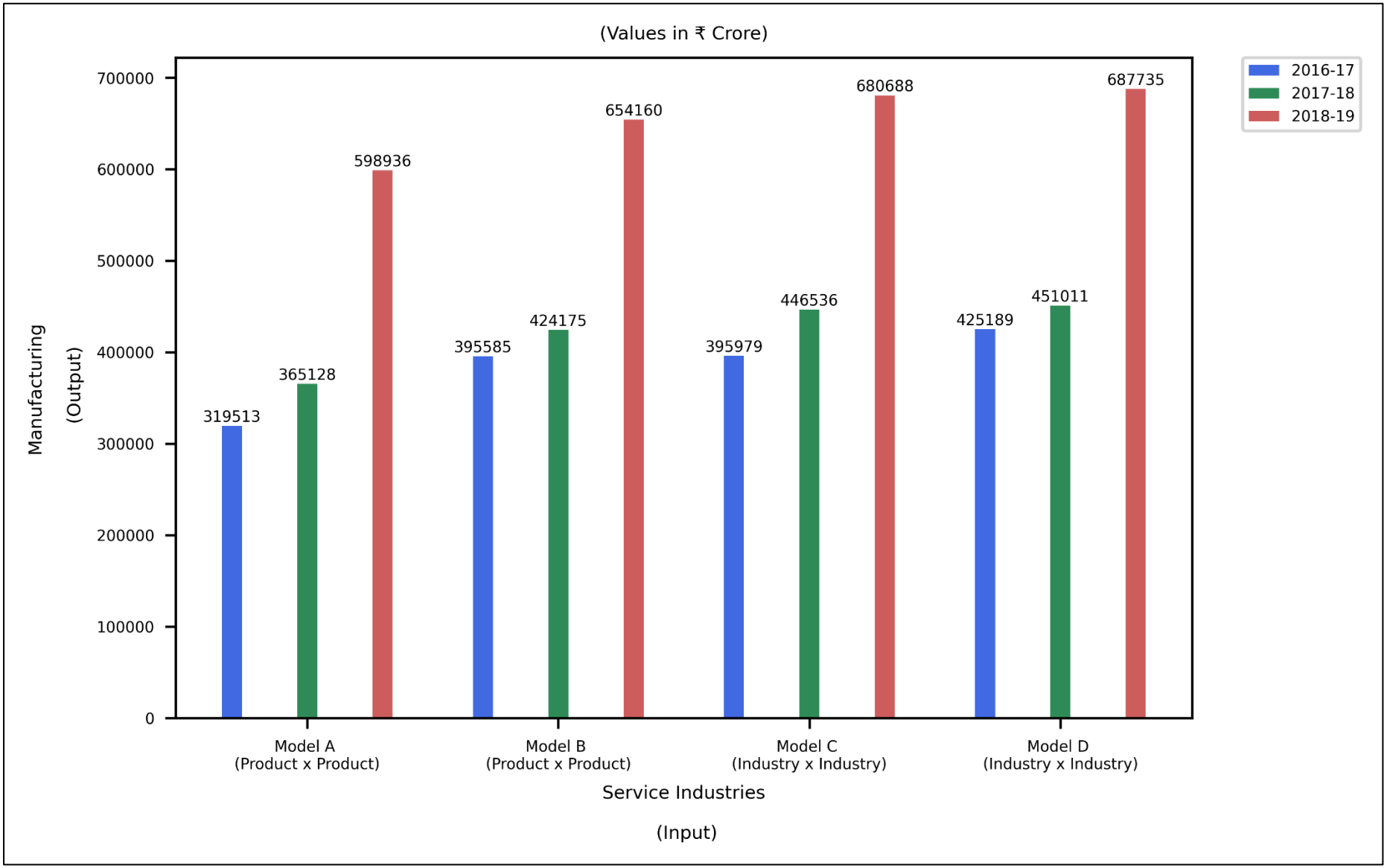
Gph 507 – *Trade and Transportation (INPUT)* ***vs*** *Public Administration and Defence (OUTPUT)*



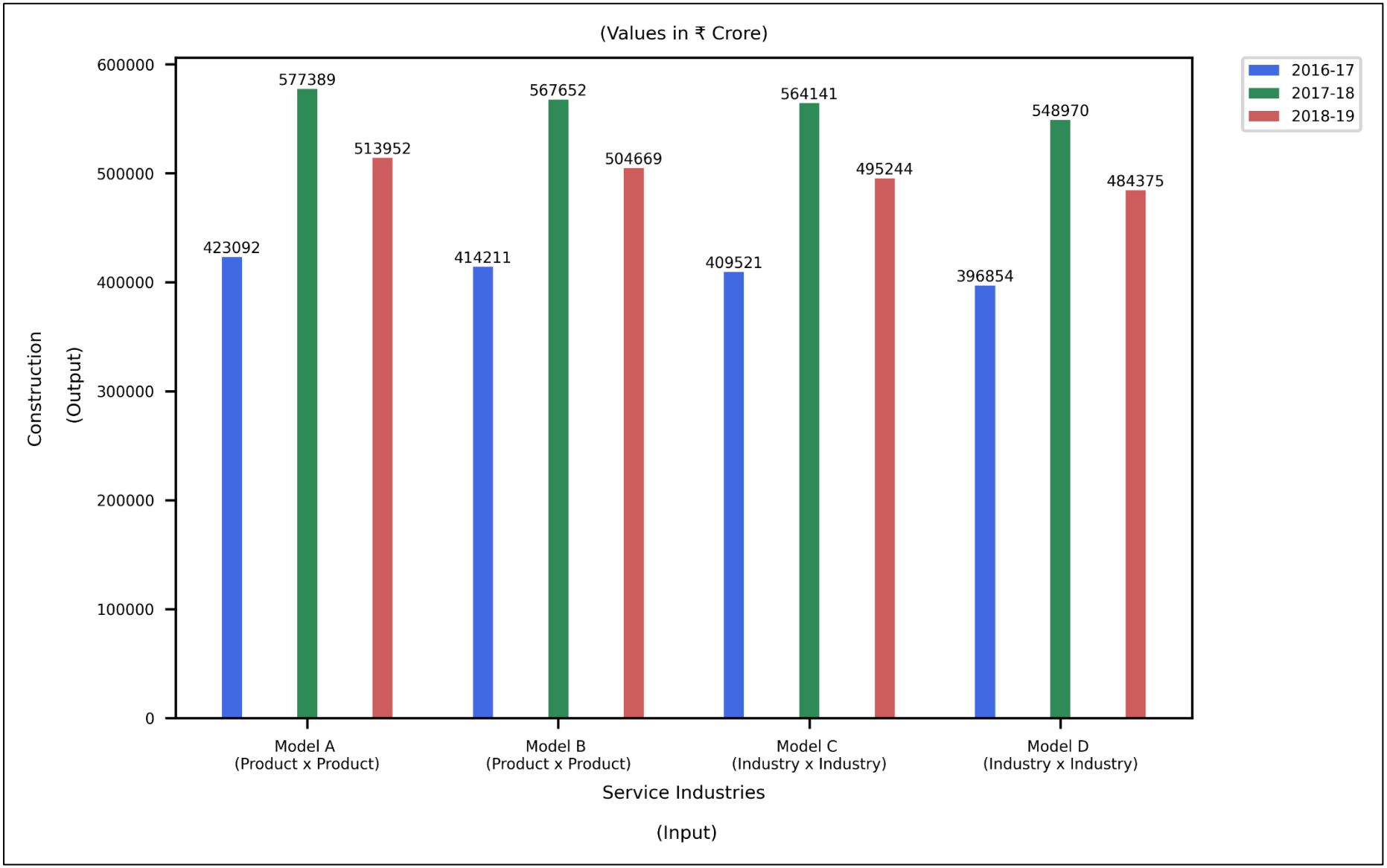
Gph 601 *– Service Industries (INPUT)* ***vs*** *Agriculture, Livestock, Forestry, Logging, Fishing, & Aquaculture (OUTPUT)*



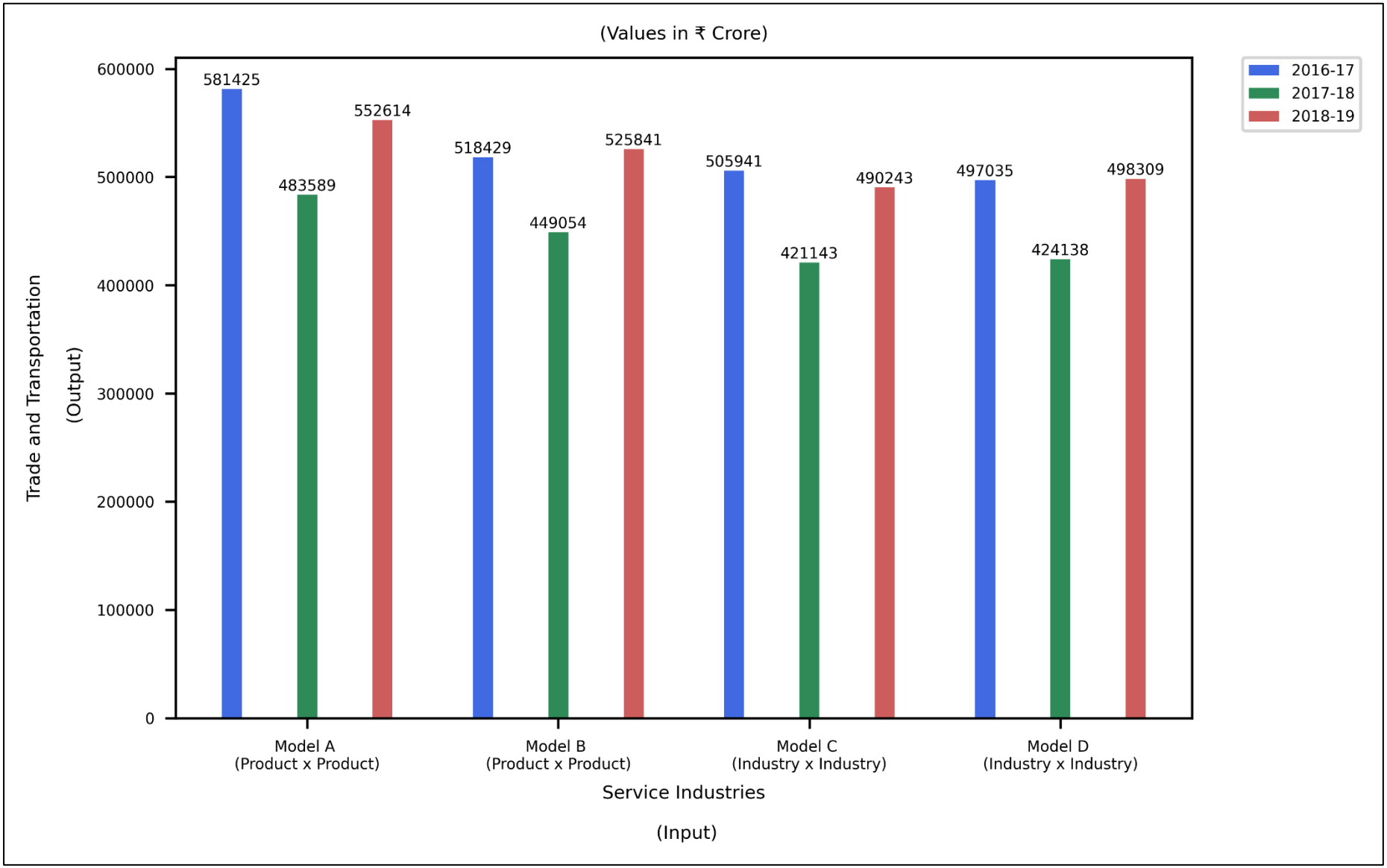
Gph 602 – *Service Industries (INPUT)* ***vs*** *Mining and Quarrying (OUTPUT)*



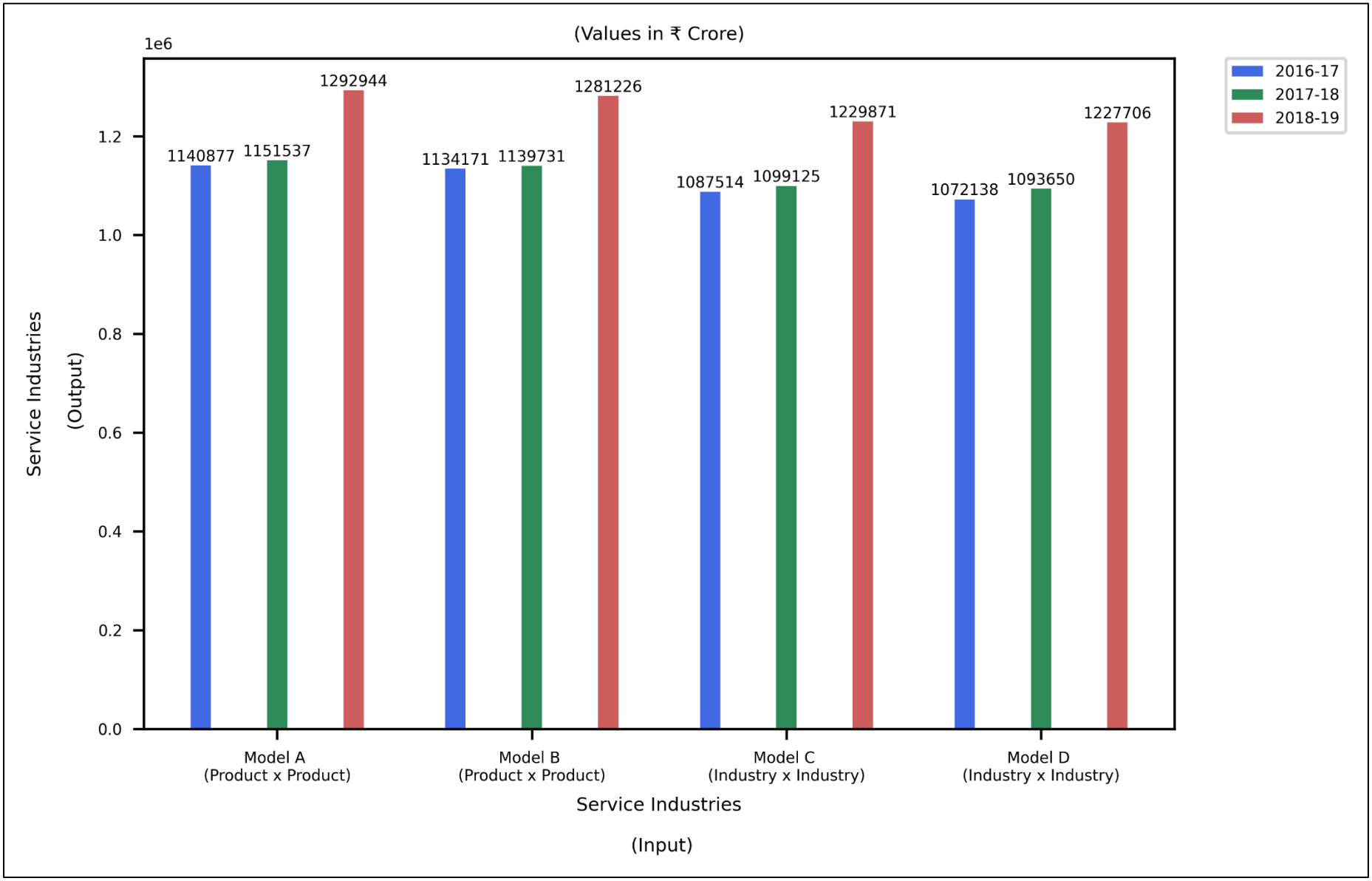
Gph 603 – *Service Industries (INPUT)* ***vs*** *Manufacturing (OUTPUT)*



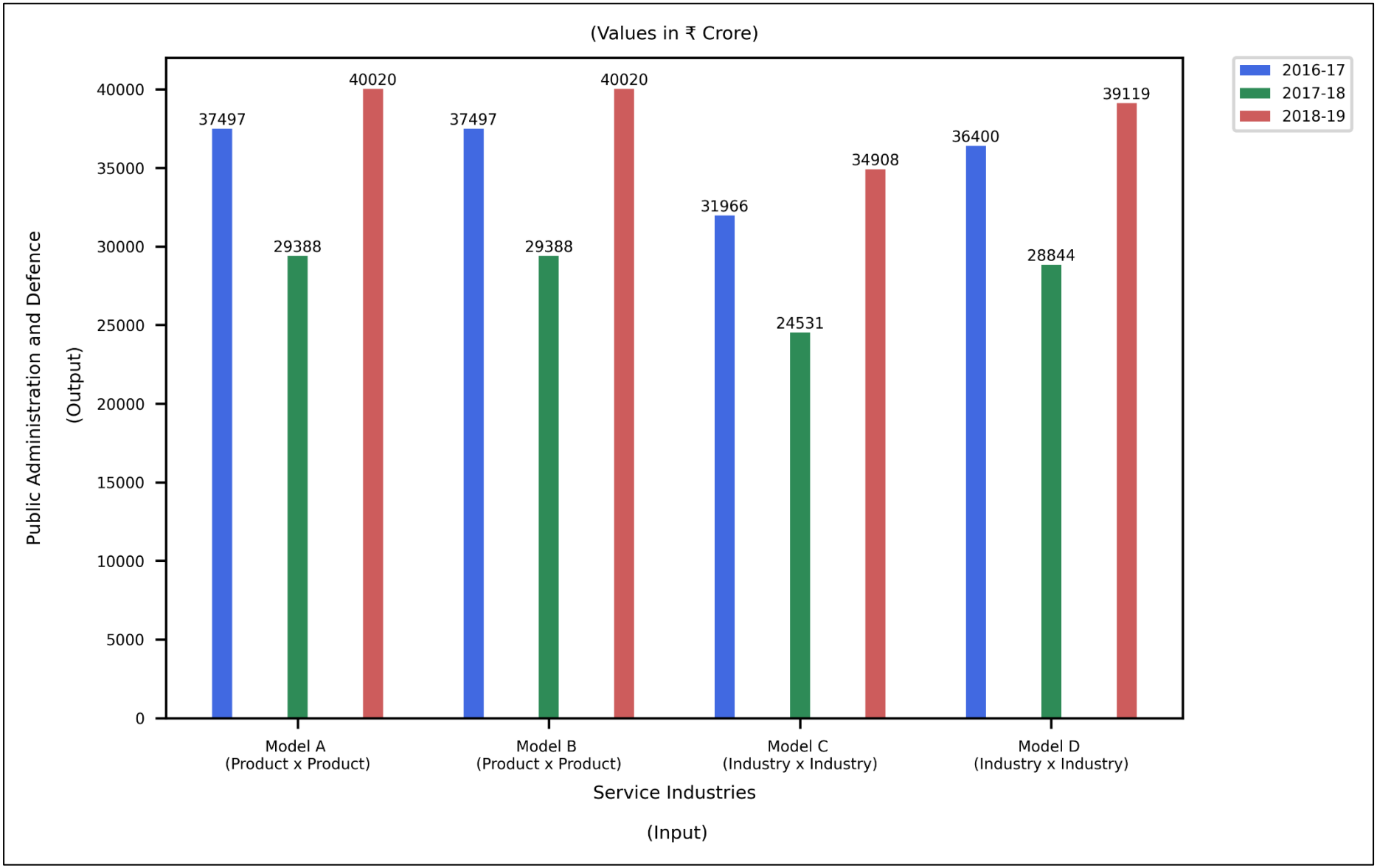
Gph 604 *– Service Industries (INPUT)* ***vs*** *Construction (OUTPUT)*



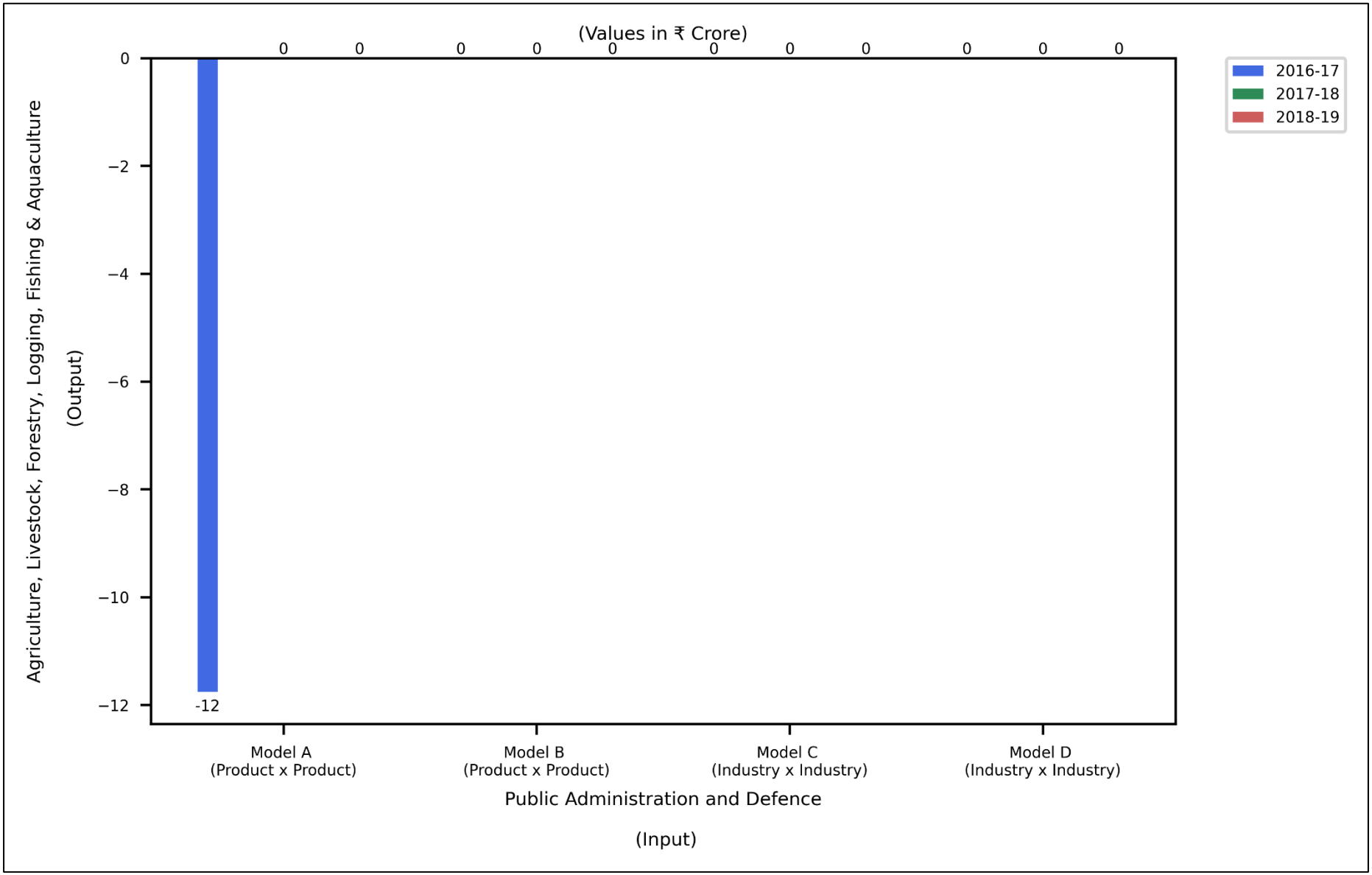
Gph 605 *– Service Industries (INPUT)* ***vs*** *Trade and Transportation (OUTPUT)*



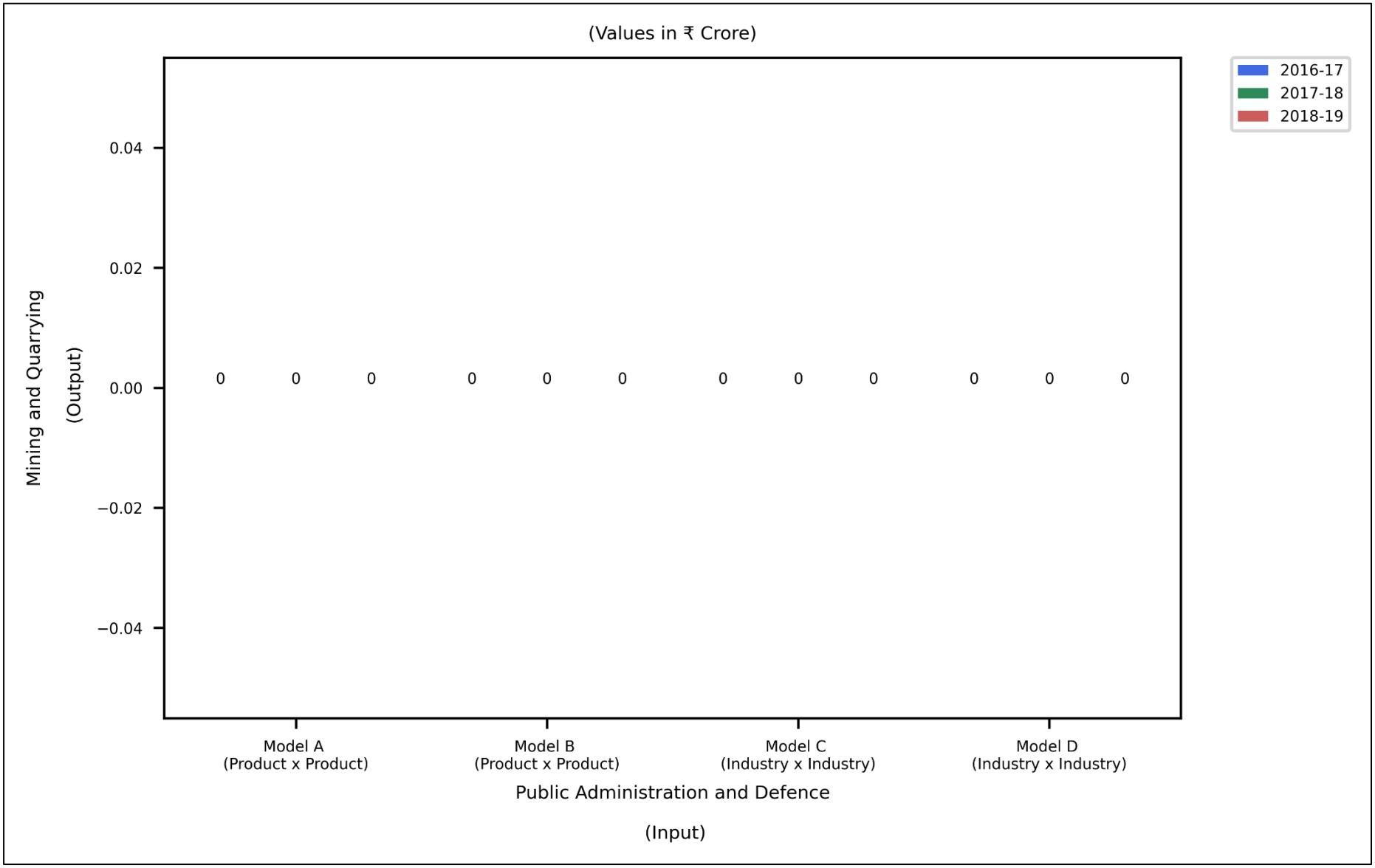
Gph 606 – *Service Industries (INPUT)* ***vs*** *Service Industries (OUTPUT)*



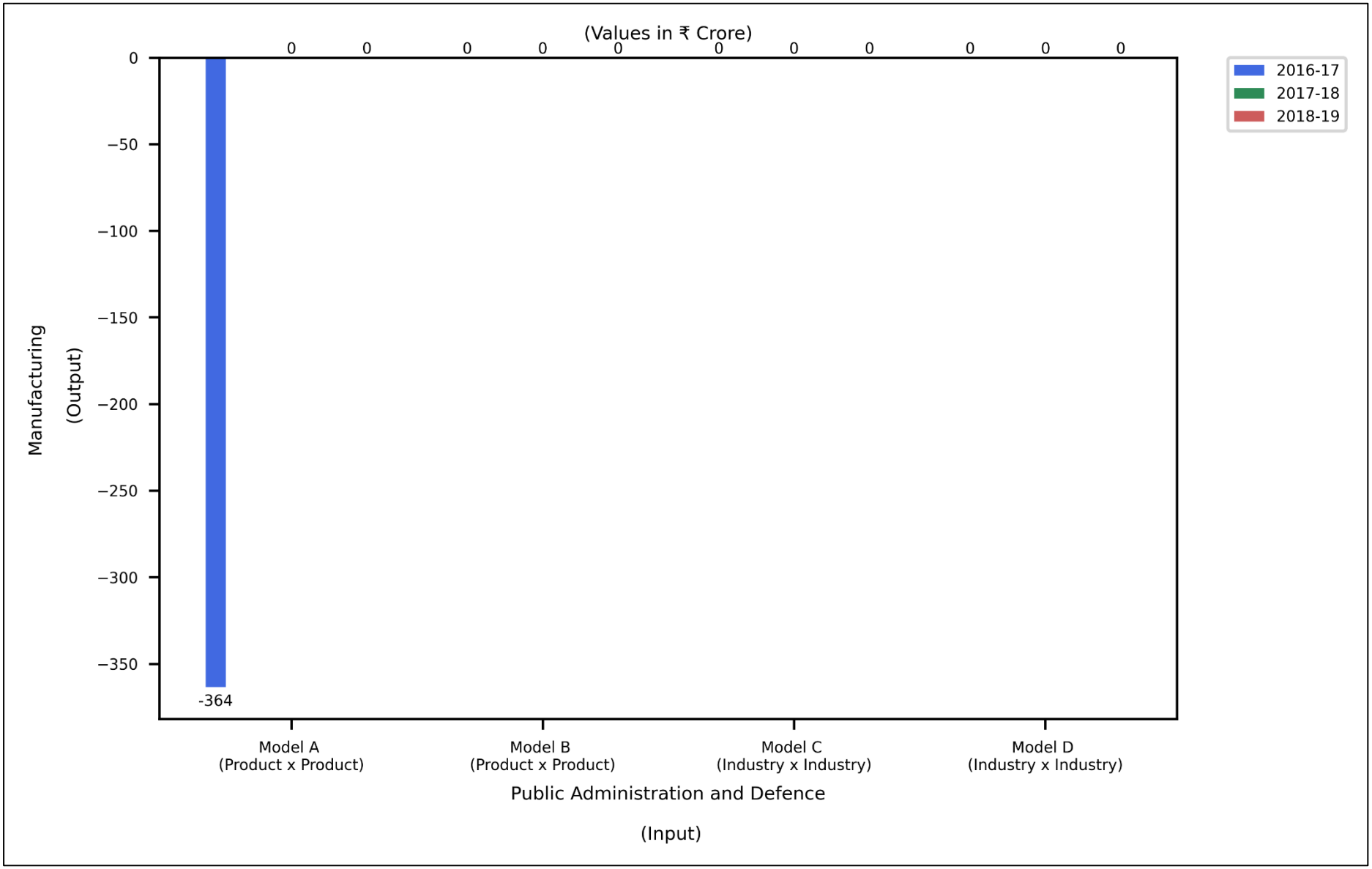
Gph 607 – *Service Industries (INPUT)* ***vs*** *Public Administration and Defence (OUTPUT)*



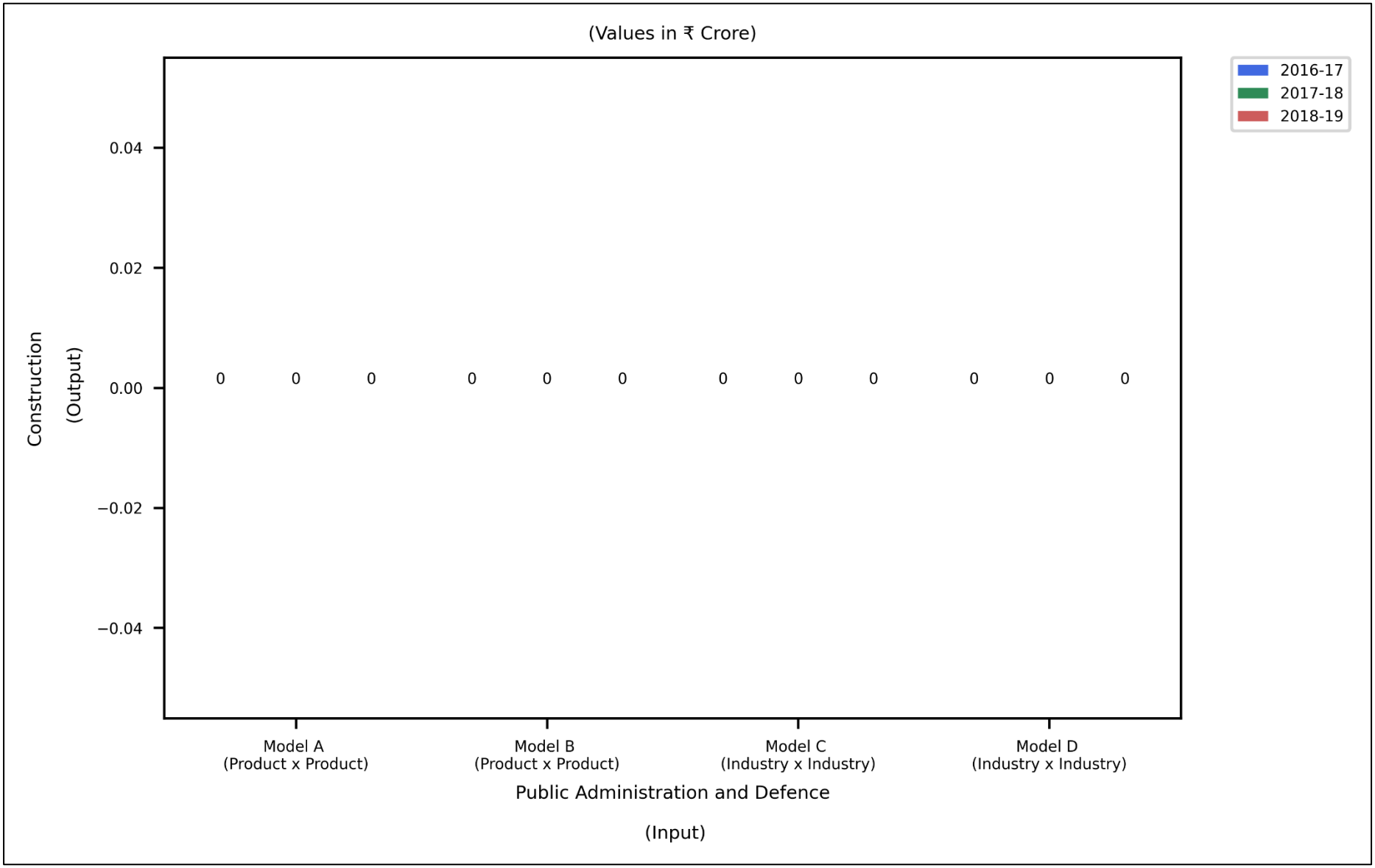
Gph 701 *– Public Administration and Defence (INPUT)* ***vs*** *Agriculture, Livestock, Forestry, Logging, Fishing, & Aquaculture (OUTPUT)*



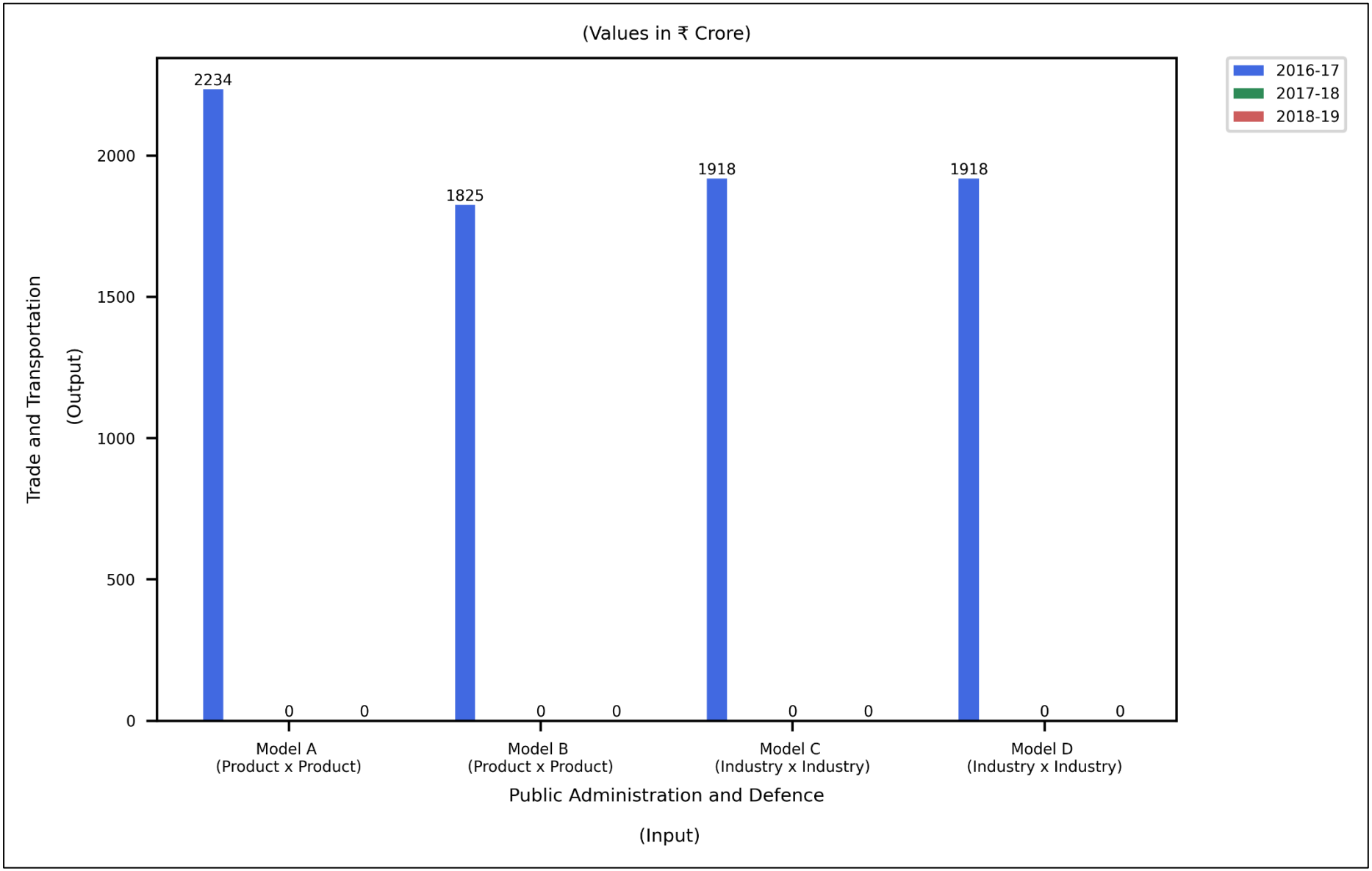
Gph 702 *– Public Administration and Defence (INPUT)* ***vs*** *Mining and Quarrying (OUTPUT)*



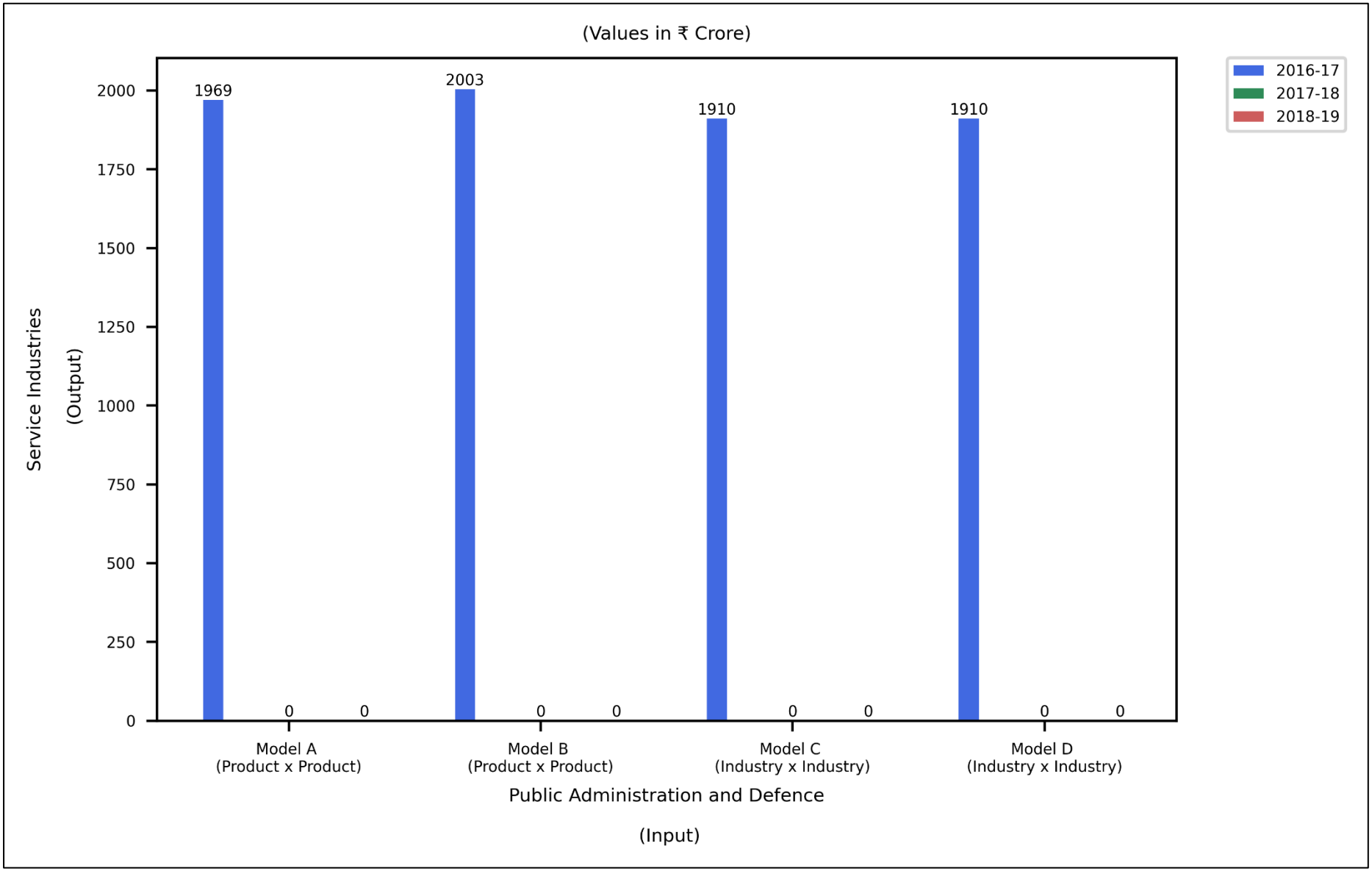
Gph 703 – *Public Administration and Defence (INPUT)* ***vs*** *Manufacturing (OUTPUT)*



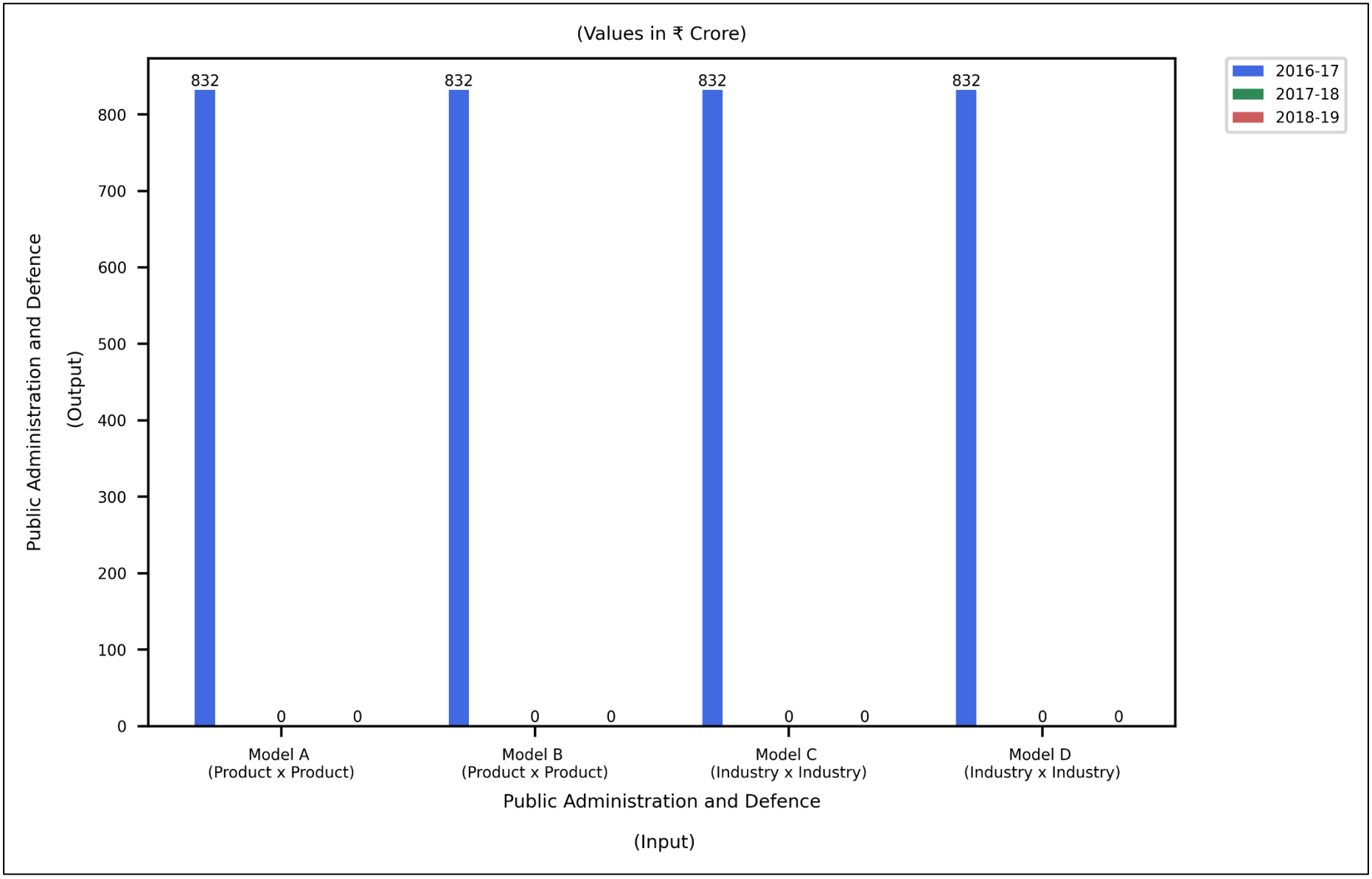
Gph 704 *– Public Administration and Defence (INPUT)* ***vs*** *Construction (OUTPUT)*



Gph 705 *– Public Administration and Defence (INPUT)* ***vs*** *Trade and Transportation (OUTPUT)*



Gph 706 – *Public Administration and Defence (INPUT)* ***vs*** *Service Industries (OUTPUT)*



Gph 707 *– Public Administration and Defence (INPUT)* ***vs*** *Public Administration and Defence (OUTPUT)*