Assessing the Role of Latvia's Participation in Indo-EU Value Chains

Vasudha Garde[1], Viesturs Pauls Karnups[2]

Abstract:

The global trade scenario is fast changing with complexities involving multi-nationals and value chains. Likewise, EU Member States trade has been more intra-EU than extra-EU; however, the Member States have now started looking at extra-EU trade partners.

A study of assessment of Latvia's trade potential with EU Member States shows that it has reached high levels of trade with its neighbouring countries and needs to look beyond its present trade partners.

Utilising basic gravity theory this article tries to explain the possibility of creation of trade by Latvia as a Member State of the EU, with special focus on the participation of Latvia in Indo-EU Value Chains (Indo -EUVCs) and the possible role Latvia can play in future.

Keywords: *European Union, India, Latvia, Trade, Value Chains*

JEL code: *F1, F10, F15, F60*

[1] *University of Pune*
[2] *University of Latvia*

1. Introduction

Global Value Chains (GVCs) have been a defining feature of 21st century trade (Gereffi *et al.,* 2001; Baldwin, 2012; OECD, 2013; Dopico & Porral, 2011). GVCs were initiated by large Multi-National Enterprises (MNEs) to improve efficiency and are now also seen in smaller firms. Structural factors, such as spatial location, markets and level of development are identified as core determinants of GVC participation. Policy reforms and trade facilitation including logistics and customs, infrastructure and institutions do however; also play an active role in promoting further involvement (Kowalski *et al.,* 2015). Both "backward" and "forward" linkages in GVCs tend to bring about economic benefits related to increased productivity, better quality and diversified exports (Koopman *et. al.,* 2010).

The European Union accounts for 16% of world imports and exports, in fact; one of the transformation reasons of post-communist economies was the interest in foreign trade with Western Europe (Cieślik, 2014; Stancu *et. al.,* 2014). Currently, EU trade policy aims at creating growth and jobs through increased opportunities for trade and investment with the rest of the world (Europeanscom.eu, 2017; Duguleana & Duguleana, 2016; Thalassinos and Dafnos, 2015).

2. Theoretical Framework

The gravity theory of trade explains that trade volumes are related positively to the economic mass of trading partners and negatively to the distance between them (Shepard, 2013). The comparative cost doctrine of trade, on the other hand, points out that countries trade based on comparative cost advantages. Recent OECD work on Trade in Value Added (TiVA) and Global Value Chains provides new empirical evidence on the internationalization of production and countries' participation in international production chains (De Backer and Miroudot, 2013). It has also been pointed out that countries undertaking reforms in areas of trade, investment, innovation, skills, and other structural policies have increased potential for participation in Value Chains. However, value-added integration to produce exports is often regionally concentrated, although, some heterogeneity is noticed in the share of domestic value added embodied in exports (Baldwin and Lopez-Gonzalez, 2015; Liapis *et al.,* 2013; Sambracos and Ramfou, 2014).

Koopman *et al.* (2010) have presented value-added by country in international trade and provided a conceptual framework for decomposing a country's gross exports into value added components by source (Annex 1). Koopman *et al.* (2010) point out that a country's gross exports to the world are a sum of five broad terms:

- Domestic value-added embodied in exports of final goods and services absorbed by the direct importer;

- Domestic value-added embodied in exports of intermediate inputs used by the direct importer to produce its domestically needed products;
- Domestic value-added embodied in intermediate exports used by the direct importer to produce goods for third countries ("indirect value-added exports");
- Domestic value-added embodied in intermediate exports used by the direct importer to produce goods shipped back to source ("reflected domestic value added");
- Value-added from foreign countries embodied in gross exports ("foreign value added used in exports").

Further, they also outline methods to identify whether a country is upstream or downstream in a value chain (Koopman *et al.,* 2010). This article examines the possibility of the creation of trade in Latvia, one of the post-communist countries, and now a recent new member of the EU, with special focus on the role it can play in Indo-EU value chains (Indo -EUVCs). The article is based on the basic gravity theory, comparative cost theory of international trade and the conceptual framework for decomposing a country's gross exports into value-added components by source.

The article discusses EU Trade (Intra- and Extra-EU), and the interest by the EU and its Member States in extra-EU trade partners after the sharp decline in intra-EU trade from 2010-2013. It also discusses the relative positions of EU countries and India in the Value Chains. The article further discusses the Indo-Latvian Economic Relations covering Latvian Trade with India, Exports as Percentage of GDP of India and Latvia, analysis of bilateral trade and its decomposition to assess the participation of Latvia in Indo-EU Value Chains (Indo -EUVCs).

3. EU Trade

According to an analysis by the Centre for Economic Policy Research (2011), the enlargement of the European Union (EU) could be attributed to the need for the expansion of intra-industry trade within EU (Dudovskiy, 2012). Annex. 2 shows the contribution of Member States to the intra-EU27 trade for 2008-2013. It is observed that for each member States, intra-EU trade of goods resulted in higher exports highlighting the importance of the internal EU market. The Figure 1 below reiterates this.

Figure 1. *Pattern of Inter-and intra-industry trade within the EU*
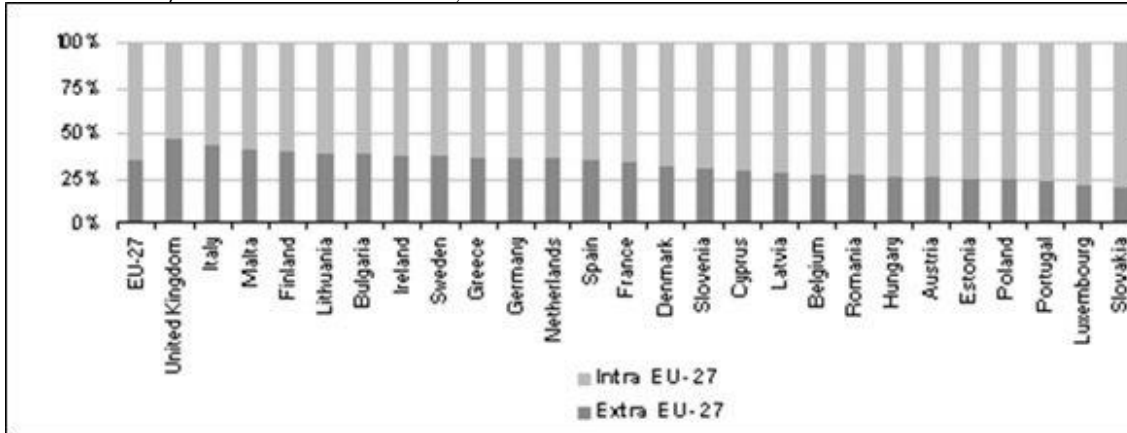
Source: *Dudovskiy, 2012 based on Eurostat.*

Figure 2 below shows the intra-EU trade from 2002 to 2016, it highlights that, although the share of the intra-EU export of the EU total exports has shown a continuous rise since 2002, a dip from 2009 to 2010 due to global financial crisis, but regaining by 2011 the level pre-crisis and remaining relative stable since then.

Figure 2. *Evolution of intra-EU-28 export of goods, January 2002 - November 2016 (EUR billion)*
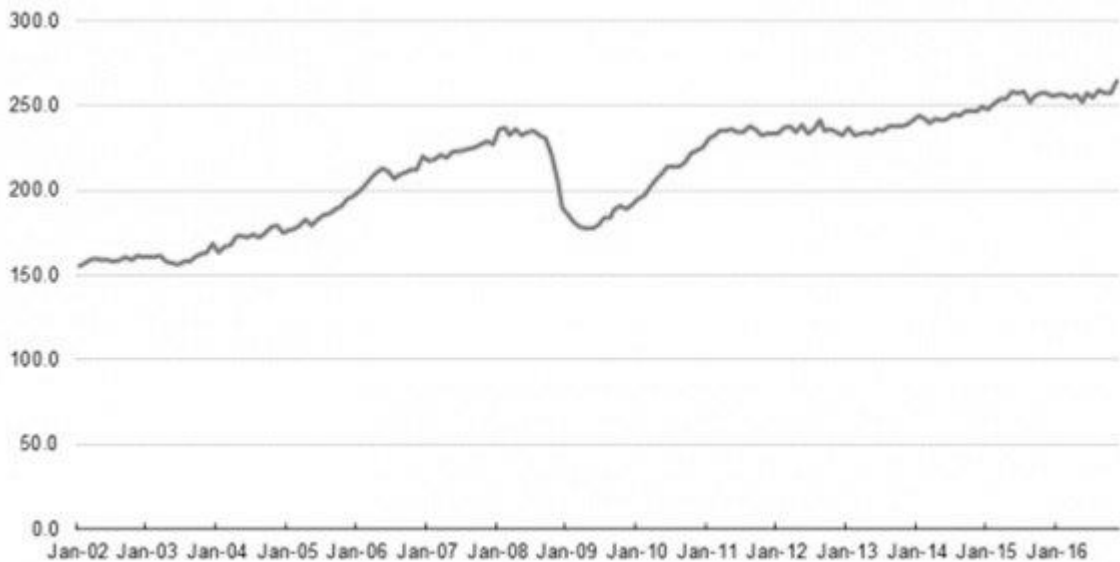
Source: *Eurostat, 2017*

The Euro Area (Figure 3) has been following nearly the same pattern as the EU, implying that the common currency might not have had the expected positive increase effect on trade amongst Euro-Zone members.

Figure 3. *Share of Intra-EU Export of the Total EU Export, 1980-2012*
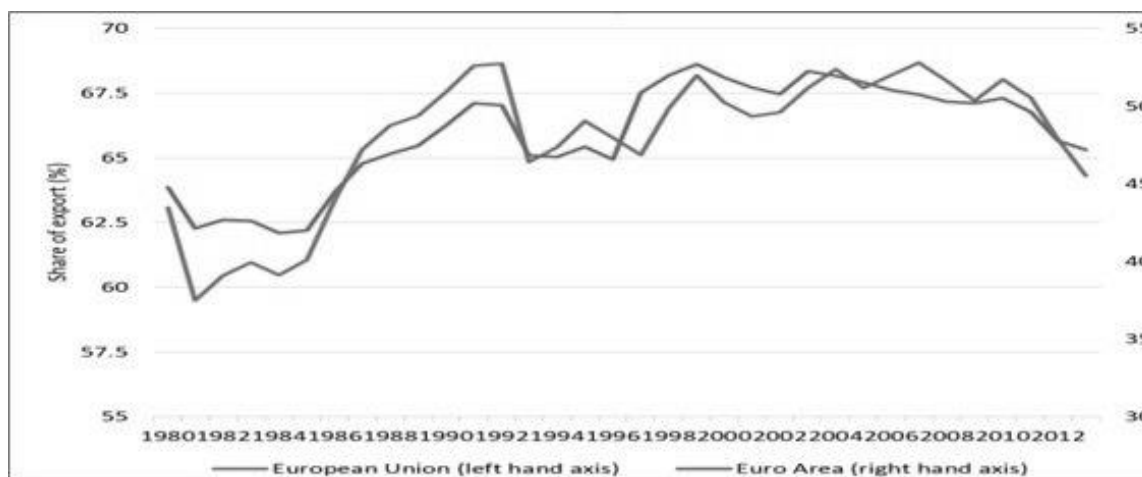
Source: *Dafnos et al., 2014, based on IMF data (Direction of Trade Statistics database).*

Thus, global trading partners are becoming more important to the EU and trade creation could be the logical outcome of this result (Czinkota *et al.,* 2008). Considering a Free Trade Area (FTA) or a Union (Dudovskiy, 2012) two possibilities can be considered firstly, operating independently, each Member State will try to use its comparative advantage, and secondly, countries will trade with other member-States, trying to exploit their comparative cost advantage through specialisation. Either way, facing lower priced, zero-tariff, imports from members-States, consumers would increase their demand for goods and new trade will be created (Dudovskiy, 2012).

4. Post-communist Member States and EU

EU as whole remains the most important trading partner for the post-communist Member States, since 70 % of their trade is with EU (Table 1).[3]

---

[3] *Most important trading partner for most of the post-communist Member States is Germany,except in case of Latvia and Lithuania, in the export market in 2012. Accordingly, trade relations with countries outside Europe is limited, although Russia is partner for Latvia and Lithuania, but none have been looking at Asia and Africa.*

Table 1. *Share of trade with EU of post-communist states 2012 (percent)*

Country	Export	Import
Bulgaria	58.4	60.6
Czech	80.9	75.1
Estonia	66.0	80.0
Lithuania	60.5	56.8
Latvia	63.5	78.1
Poland	75.7	74.7
Romania	70.2	73.5
Slovakia	83.9	74.0
Slovenia	68.8	67.2
Hungary	75.8	70.2

Source: *Cieślik, 2014, based on Eurostat*

Latvia and other economies which are participating in GVCs of European Union market, have become important gateways to the European Union (Dicken *et al.,* 2001), thus creating a need for structure and direction of trade (IMF, 2013).

Further, these countries have low production costs and low wages per hour and thus have comparative cost advantages in trade. It is observed that, a large share of the external trade of Central and Eastern European (CEE) countries passes through global value chains (Koopman et. al., 2010), in which exporters from these countries, including Latvia, are usually located further "downstream" (Koopman *et al.,* 2010; see also "OECD/WTO TRADE IN VALUE-ADDED (TIVA) INDICATORS" at http://www.oecd.org/sti/ind/TiVA_EU27_JUNE_2013.pdf).

Asian and American companies would be interested in investing in the post-communist Member States, perceiving them as a great opportunity to enter the

advanced Western European market. Although the leaders of the investment goals of foreign companies were Poland, the Czech Republic, and Hungary (World Investment Report 2013), Latvia too has taken initiatives to attract investment from foreign companies, and is already integrated in European Union Value Chains.

5. Indo-Latvian Economic Relations

It is significant to note that the EU is India's largest trading partner- 13.5% of India's overall trade with the world in 2015-16, (European Commission Directorate General of Trade, 2017) and has achieved a strong position by operating together as a Union on the global stage.

In 2016 EUs imports from India were €39.3 billion and EU exports to India were €37.8 billion thus comprising 2.2% of extra-EU's trade and making India the EU's 9th trading partner in 2016 (European Commission Directorate General of Trade, 2017). India has been negotiating a Broad-based Bilateral Trade and Investment Agreement (India-EU BTIA) with the European Union since 2007 (Asia Regional Integration Center, 2017). Institutional agreements have also been put in place for promoting trade, investments and other relations.

Although EU's achievements at a global level are linked with the success of trading partners, the pace of progress of the European Union process could slow down; bilateral efforts by the Member States would be of importance in the strategic engagement with the outside world (Kumar, 2014).

Latvia is one of the new entrants into the EU. Latvia, with its three free ports, is situated near of large economies of Europe and Russia. Further, commonalities between India and Latvia regarding commitment to democracy have maintained warm and friendly relations between the two countries. There are infrastructural advantages, liberalised legalities and financial and tax benefits for doing business in Latvia. Since Latvia holds a vital position in Europe,[4] there are excellent opportunities for Indian exporters to make Latvia a distribution hub for their businesses and avail of efficient and affordable connectivity to transfer goods within EU, Russia, CIS and other Baltic countries.[5]

---

[4]*Latvia, with its three free ports, is situated in close proximity of affluent economies of Europe and Russia. With one of the cheapest logistic facilities in Europe, Latvia serves as a gateway to Europe, Russia, CIS and other Baltic countries. Automated Latvian ports offer good Ro-Ro connectivity, inter alia, to Scandinavia, Germany and Russia. Latvia is a partner country in the EU's high speed 'Baltic Rail' project, a Euro 5 billion project, connecting Berlin (Germany), Warsaw (Poland), Kaunas (Lithuania), Riga (Latvia), Tallinn (Estonia), St. Petersburg (Russia), and Helsinki (Finland). Efforts are also on to develop India-Baltic Rail Corridor.*

[5]*Latvia offers good opportunity to Indian companies to participate in infrastructural development in Latvia being funded by EU. Indian companies seeking to establish industries in Latvian free ports/SEZs can avail of subsidy on their investments in plant and machinery in addition to substantial tax rebates. Indian Industries can avail of EU funding for advance research activities in Latvia. The Indian film industry seeking to use the Latvian studios can also avail of subsidy. Further, Latvia offers liberal immigration schemes to attract Foreign Entrepreneurs. The sectors of relevance to R&D and innovation and infrastructural development; Transport & Logistics; IT & Electronics, including e-Governance; Astronomy; Aviation; Defense; Textiles; Life Sciences including healthcare,* Ayurveda, Yoga and Pharmaceuticals; Metal industries; Baltic Rail project; Timber & Forestry; India's flagship

6. Indo-Latvian Trade

Latvia's involvement in global economy through the interwar period to the 21st Century has been mainly through foreign trade, transit, international services (e.g. shipping), capital flows (as State external debt, foreign capital investment in Latvian undertakings and foreign capital credits), international trade agreements, tourism, and other ways (Karnups, 2015). Although, Latvians had knowledge of India at least since the middle of the 19th century, for most Indians however, Latvia is yet little known. The interwar period saw economic relations between Latvia and British India mainly as foreign trade, however, these relations ended with the outbreak of WWII in 1939.

Latvia imported furs and hides, rice, coffee and tea, jute and cotton, nuts and seeds, spices and condiments from India, whilst it exported mainly plywood, timber and timber products, paper and paper products, and lubricating oils to India. However, although there was growth in trade in the late 1930s, trade and thus economic relations were of less importance to both countries in the interwar period. In the period up to 1991, India traded with USSR, thus the breakup of Latvia-India and trade is difficult to assess. Since Latvia acceded to the EU in 2004, trade and investment between India and Latvia has been slowly growing. Latvia is envisaged by India as the nation that occupies a pivotal position as a gateway to the opportune Baltic market.[6] An analysis of economic relations between Latvia and India are discussed in the sections that follow.

7. Exports as a Percentage of GDP

Comparing exports as percentage of GDP of India and Latvia for the period 2004 to 2015 (Table2), one can observe that in the Indian context, for the entire period, the share of exports to GDP is smaller than in the context of Latvia. This implies that during the period 2004-15, Latvia has been trading more than India as percentage of GDP.

Table 2. *Exports of Goods and Services as % GDP (2010 Constant Prices)*

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Latvia	39.1	43.2	40	38.5	39.5	42.6	53.7	57.9	61.4	60.3	59.6	59
India	17.6	19.3	21.1	21	24.3	20.6	22.6	24.5	24.5	25.4	23	20
EU	34.24	35.57	37.67	38.45	38.88	34.66	38.33	41.00	42.21	42.34	42.66	43.39

Source: *Exports of goods and services (% of GDP). World Bank national accounts data, and OECD National Accounts data.*

---

initiatives including Make in India, Digital India, Skill India, etc.; Food processing and agro products and FMCG; and Higher Education collaboration.

[6]*India and Latvia have also reached a reciprocal support arrangement whereby Latvia would support India's candidature to the UNSC non-permanent seat for 2021-22 and India would support Latvian candidature to the UNSC non-permanent seat for 2026-27. In December 2010, an India-Latvia Parliamentary Friendship Group was set up in Latvian Parliament. A similar Friendship Group has also been set up in Parliament of India. https://www.indianembassy.se/relationpage.php?id=4*

8. Indo-Latvian Bilateral Trade

Table 3 explains Indo-Latvian bilateral trade; it was US $ 141 million in2015-16, the major Indian exports being tea, coffee, tools, pharmaceuticals, chemicals, garments, iron &steel.[7] The major Indian imports are chemicals, fertilizers, iron & steel, machinery.[8]

Table 3. *India –Latvia Trade (US$ Mn)*

Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
India GDP	1333	1385	1502	1657	1767	1863	1985	2128	2297
Latvia GDP	29.913	28.834	24.701	23.765	25.241	26.251	27.011	27.579	28.334
India Exports to Latvia	59.5	44.93	47.17	103.19	96.018	104.08	102.07	98.12	79.50
Latvia Exports to India	40.95	113.87	154.94	196.32	141.53	73.63	103.89	36.22	61.64
Total	99.95	158.80	202.11	299.51	237.71	177.71	205.96	134.34	141.14

Source: *Ministry of Commerce, India.*

9. Analysis

Applying the gravity theory to Indo-Latvian trade data, one can see that trade volumes between the two countries are very much less although the GDP / economic mass of trading partners is large enough. The spatial distance between India and Latvia could also explain the reason for the low level of trade between them (Shepherd, 2013). However, if one studies the transformations and integration processes

---

[7]*Potential for Indian Exporters in Latvia would be Chemical and allied products, foodstuffs and textiles have traditionally been*

Indian strongholds among our export products to Latvia, Oils & fats, vegetables, footwear, ICT collaborations with Latvian companies.

[8]*There is scope for growth of textiles, agro-products, gems and jewelry, chemical dyes and pharmaceuticals.*

of Latvia and India, we observe that they have resulted in changes in the production process across borders and thus non-policy factors such as stage of development, structure of industry, strategic location and policy-factors such as FDI incentives will impact trade between the two nations in terms of both backward and forward integration in GVCs. As is explained in this article, Latvia has the potential to be further integrated in the Indo-EU value chains and be located more upstream in segments of production (Cieślik, 2014).

In the sections that follow, the authors analyse: (A) value-added content in exports based on the decomposition of exports for India, Latvia, Germany and Poland, (B) share of foreign value content of exports in India, Germany, Poland and Latvia so as to understand the level of integration of these countries in the GVCs and their position in the GVCs, (C) level of integration of these countries in the Global Value Chains, (D) participation in GVCs by Latvia and India on the basis of the Global Participation index, (E) value-added that Returns Home as Final Goods Imports, (F) trade in Intermediate Goods and Services, (G) trade Facilitation to assess the impact of the other factors that influence trade between Latvia and India and (H) the article assesses the participation of Latvia in Indo-EU Value Chains (Indo -EUVCs) and the possible role that it can play in future.

9.1 Value-added content in exports

Table 4 highlights the position of EU, Accession countries and India in the Global Value Chains in 2004 and presents the data of the decomposition of exports. Analysis of the data can explain the GVC participation of EU, Accession countries and India (the analysis of the various components has been explained below).

Table 4. *Decomposition of exports in the Global Value Chains 2004*

Country	DVA in Direct Exports of Final Goods	DVA in Intermediates absorbed by direct importer	Indirect DVA Exports to third Countries	Returned DVA	Foreign Value added	Total
EU	38.1	29.6	13.5	7.4	11.4	100
Accession Countries	30.2	30.8	18.6	0.4	20.1	100
India	28.7	29.2	10.4	1	30.8	100

Source: *Koopman et al., 2010.*

Table 5 presents the data of the decomposition of exports for India, Latvia, Germany and Poland (for the period 1995 and 2011). The factors considered include, (1) DVA sent to consumer economy corresponds to the DVA embodied in either final or intermediate goods and services that is directly consumed by the importing country; (2) DVA sent to third economies representing the DVA added contained in intermediaries exported to a 1ˢᵗ country that re exports them to a 3ʳᵈ country as

embodied in the other goods and services (multiple VA exchanges between GVCs, resulting in Forward Linkages in GVC; (3) DVA reimported into the economy implying the DVA of exported intermediaries or inputs sent back to the economy of origin as embodied in other intermediaries and used to produce exports; and (4) Foreign Value content of Exports, which is the vertical specialisation (Backward Linkages of GVCs), involving the VA of inputs that were imported in order to produce intermediate or final goods to be exported. Analysis of Table 5 is seen in various sections below.

Table 5. *Trade in VA and GVC 1995-2011%*

	DVA sent to consumer economy 1		DVA sent to third economies 2		DVA re-imported into the economy3		Foreign Value content of Exports 4	
	1995	2011	1995	2011	1995	2011	1995	2011
India	77.1	56.8	13.6	19.1	0	0.1	9.3	24
Latvia	59.4	47.3	17.9	24	0	0.1	22.7	28.6
Germany	63.9	49.4	20.7	24.1	0.6	1	14.8	25.5
Poland	63.9	44.2	19.9	23.3	0	0.2	16.1	32.3

Source: *WTO Country Statistics*

9.2 Share of Foreign Value

Table 4 shows that the share of foreign value in EU exports is 11.4% indicating that its own domestic value added to exports is 88.6%, which is very high. As against this for India, the share of foreign value added is 30.8% indicating India s domestic value-added accounts for about 70 % of its value of exports and for Accession countries about 80% is its domestic value added. Table 5 shows that the share of foreign value in Indian exports has risen considerably from 9.3 % in 1995 to 24% in 2011, indicating that its own domestic value added in exports has reduced from 90.7% in 1995 to 69.2 % (Foreign Value 30.8%) in 2004 (Table 4) probably because of impact of globalization, however , the domestic value increased thereafter to 76% in 2011 which means that India has not opened sufficiently to foreign trade and is yet to integrate in the global supply chain . Comparing 1995 and 2011 data (Table 5), we observe that Germany's foreign value content of exports has increased from 14.8 to 25.5, in case of Poland it has increased from 16.1 % and 32.3 % and Latvia shows 22.7% and 28.6% for the same period implying that these countries are getting more integrated in the GVC.

9.3 Level of Integration

Table 4 shows that India and Accession countries like Latvia use a large amount of imported content for production of goods exports. India (69.2%) and EU Accession Countries (79.9%) have a higher share of domestic content in exports, which also implies that they are less integrated in global supply chain across all goods and services. Analysis of data for 2011 displayed in Table 5 shows similar

interpretations in the context of data for India (DVA 76 %), Latvia (71.4%), Germany (74.5 %) and Poland (67.7%). On the other hand, most developed countries and natural resource exporters use imported value added largely in production of intermediate exports. Advanced countries generally have higher domestic content in their exports (EU 88.6%), although a large portion of such value may return home via imports (EU 7.4%).

9.4 Participation in Global Value Chains (GVCs)

The position of countries within a value chain-upstream/ downstream- can be understood from sectoral level decomposition by comparing the country's exports of intermediaries in the same sector. Table 4 shows that in 2004 the EU produces inputs for others (by producing raw material and manufacturing intermediaries), it therefore participates in Upstream in the GVC, as reflected by the indirect value added exports (IV) share in gross exports (13.5%) which is higher than its FV share (11.4%). In comparison EU Accession Countries and India are downstream in the global value chain, since they use a large portion of the other countries intermediaries to produce final goods for exports as reflected by their FV share (20.1% and 30.8% respectively) which is much higher than their IV share (18.6% and 10.4% respectively). However, data in Table 5 shows that India's IV in 2011 is less than the FV (19.1%<24%) implying that India has moved up in the GVC, so is the case with Latvia (24%<28.6 % and Poland 23.3%<32.3%; whereas, Germany's position is same.

Table 6 shows the GVC Participation Index, which is compiled from Table 5. The GVC participation index comprises of two parts showing the upstream and downstream sides in the chain.[9]Forward participation to GVCs is "Domestic value added sent to third economies" (Table 5) for further processing and export through the value chain and is looked as supply side in the GVC participation index[10]. Backward participation to GVCs is the "Foreign value-added content of exports" and is sourcing side in GVCs, where an economy imports intermediates to produce exports.

Table 6. *GVC Participation Index % Share in Total exports2011*

	Total GVC Participation	Forward Participation	Backward Participation

Developing Countries	48.6	23.1	25.5
Developed Countries	48	24.2	23.8
India	43.1	19.1	24
Latvia	52.6	24	28.6
Germany	49.6	24.1	25.5
Poland	55.5	23.3	32.3

Source: *WTO Country Statistics.*

Analysing the data in Table 6, one can observe that as compared to the developing countries (48.6%), India (43.1%) needs to be more integrated in GVC. Latvia (52.6), on the other hand, is more integrated in the GVC than Poland (55.5%) and Germany (49.6%) and even as compared to the developed countries (48%). India and Latvia are more towards backward participation whereas Germany and more so Poland's participation is more upstream.

9.5 Value Added that Returns Home as Final Goods Imports

Domestic Value Added re-imported into the economy (Returned DVA) is the DVA of exported intermediaries or inputs sent back to the economy of origin as embodied in other intermediaries and used to produce exports. Table 4 shows that in 2004, the DVA Returned forms a very small share of exports of countries, the Accession countries (0.4 %) and India (1%) and the largest share is in EU (7. 4%). Table 5 shows that in 2011, DVA Returned forms a still smaller share of exports in India (0.1%), Latvia (0.1%), Germany (1%) and Poland (0.2%). This implies that yet none of these countries (exception of EU) are substantially re-importing from countries to which they are exporting.

Further analysis of sources of value added that returns home via final goods imports are explained in Table 7. It is seen that EU contributes a lower share (7.8%) of value to its own final goods imports returns home. EU received greater than 40% of value from within, i.e. EFTA and Accession Countries, whereas only 3.8% which is a much smaller value from India. In the case of USA 10% of value to its own final goods imports returns home. It received about 4.7% of value from EFTA and accession countries and 1.5 % from India.

Table 7. *Sources of value added that returns home via final goods imports, 2004.*

Country	USA share of imports from partner countries	Partner share of total	EU Share of imports from partner countries	Partner share of Total
Accession Countries	1.7	0.2	20.8	34.3
EFTA	3	0.4	19.6	18.1

India	1.5	0.2	3.8	1
World	10	100	7.8	100

Source: Koopman et al, 2010.

9.6 Trade in Intermediate Goods and Services

Observing the share of intermediate goods/inputs in trade in Table 8, it is seen that for the EU 60.4% of its exports are intermediate goods.

Table 8. Share of Intermediate goods/inputs in trade 2004

	Gross Exports			Gross Imports		
Country	Value in US $ bn	Share of Intermediate %		Value in US $ bn	Share of Intermediate %	
		Proportion	End use		Proportion	End use
EU	1575.5	60.4	57.2	1624.2	62.8	61.1
Accession Countries	273.7	58.2	57.9	306.1	66.9	64
India	99.9	59.2	63.5	121.1	75.8	81.9

Source: Koopman et al., 2010.

WTO data explains that about 20 % of developing country exports are from EPZs; these countries provide incentives to use imported intermediate inputs, provided that the resultant goods are entirely exported. For most developing countries the end use method gives rise to a lower intermediate share in exports, however it is seen that India supplies more final goods to its domestic markets than what it supplies for exports , thus the higher end use share in exports (63.5%> 59.2%) as seen in Table 8.For the EU and Accession Countries on the other hand the end use method gives rise to a lower intermediate share in exports, which implies that they supply less final goods to their domestic markets than what they supply for exports.

9.7 Trade Facilitation

Table 9 presents the Trade Facilitation data involving cost to export at border (US $ per container), time to export at border no. of days and Documents to export for India, Latvia, Germany and Poland for the year 2014.

Table 9. Trade Facilitation 2014

	Exports			Imports		
	Cost to export at	Time to export at border	Documents to export (no.)	Cost to import at border US	Time to import at border no.	Documents to import

	border US $ per container	no. of days		$ per container	of days	(no.)
India	1332	17	7	1462	21	10
Latvia	600	10	5	801	11	5
Germany	1015	9	4	1050	7	4
Poland	1050	15	5	1025	14	4
World Avg.	1841	22	6	2084	25	8

Source: *WTO Country Statistics*

For both exports and imports the cost of trade at the border and trade facilitation are lowest in Latvia, particularly as compared to Germany as also Poland. This cost-effective trade facilitation in Latvia is a great attraction for Indian companies to think of relocating their factories into Latvia.

9.8 Assessing Participation of Latvia in Indo-EU Value Chains

It is seen from the above analysis that, India has a comparative cost advantage in trade with Latvia. Transformations in the economy of Latvia and its accession to EU and the non-policy factors have resulted in dynamism and changes in the production processes. There is potential for Latvia to be further integrated and move upwards in the Indo -EU value chains. The Latvian government is attracting Investments into Latvia by providing free ports and SEZs, government subsidies on investments in plant and machinery and substantial tax rebates. Thus, Latvia can be looked at as an ideal opportunity to invest and Latvia can play an important role in EU value chains with India.

10. Conclusions and Suggestions

EU Member States trade has been seen to be moving towards extra-EU trade in recent years. Latvia's trade potential with EU Member States has reached high levels of trade with its neighbouring countries and Latvia needs to look beyond its present trade partners. Applying the basic gravity theory to Indo-Latvian trade data, one can see that trade volumes between the two countries are very much less although the GDP / economic mass of trading partners is large enough. The spatial distance between India and Latvia could also explain the reason for the low level of trade between them. However, the above analysis explains the possibility of further creation of trade between India and Latvia based on lower production costs and lower wages per hour as explained in the section on trade facilitation. India has comparative cost advantage in trade with Latvia and therefore, although trade volumes between the two countries are very much less, the GDP / economic mass of trading partners is large enough. The large geographical distance between the two nations can explain the low level of trade between the two countries. However,

transformations in the economy of Latvia and its accession to EU have resulted in dynamism and changes in the production processes.
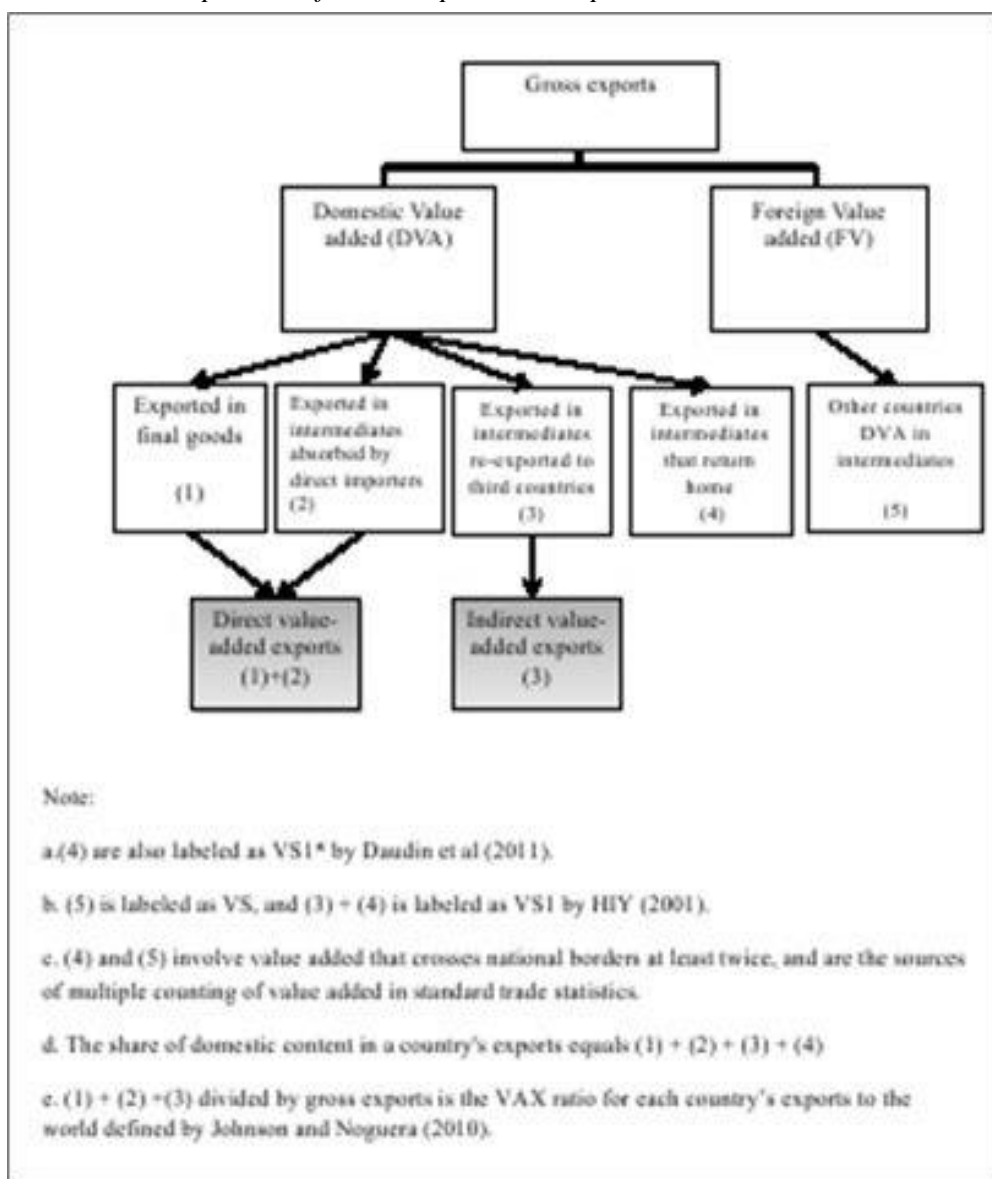
Latvian economy has opened and the government is attracting Investments into Latvia by providing free ports and SEZs, government subsidies on investments in plant and machinery and substantial tax rebates and the Start-up Laws, besides of course the establishment of Rail Baltic. Such non-policy factors can also affect both backward and forward integration in GVCs. Latvia has the potential to be further integrated in the Indo-EU value chains and be located more in upstream segments of production. Further, Latvia is now a member of OECD. India can take this opportunity to invest in Latvia, since it is already trading with EU. Latvia can thus play a vital role in Indo-EU value chains (Indo-EUVCs).

References:

Asia Regional Integration Center 2017. https://aric.adb.org/fta/india-european-union-free-trade-agreement.

Baldwin, R. & Lopez-Gonzalez, J. 2015. Supply-chain Trade: A Portrait of Global Patterns and Several Testable Hypotheses. The World Economy, Wiley Blackwell, 38(11), 1682-1721.

Cieślik, E. 2014. Post-Communist European Countries in Global Value Chains. Ekonomika, 93(3), 25-38.

Czinkota, M.R., Ronkainen, I.A., & Moffett, M.H. 2008. International Business (8th Edition), USA, John Wiley & Sons.

Dafnos, G., Thalassinos, I.E., Pelagidis, T. & Katsikides, S. 2014. European Common Currency: Optimum Currency Area Theory and EMU's Trade Effect: A Literature Review. Working Papers per Research Pillar, European Research Study Group (E.R.S.G.) on the Political Economy of the E.M.U.

De Backer, K. & Miroudot, S. 2013. Mapping Global Value Chains. OECD, Trade Policy Papers, No. 159, OECD Publishing, Paris.

Dicken, P., Kelly, P. & Olds, K. 2001. Chains and networks, territories and scales. Towards a relational framework for analysing the global economy. Global Networks, 1(2), 89-112.

Dopico, D.C. & Porral, C.C. 2011. Analysis of Value Chain and Sources of Differentiation in International Fashion Markets. European Research Studies Journal, 14(1), 15-28.

Dudovskiy, J. 2012. Inter-industry and intra-industry trade. Heckscher-Ohlin Model. http://research-methodology.net/inter-industry-intra-industry-trade-heckscher-ohlin-model/

Duguleana, L. & Duguleana, C. 2016. Structural Aspects of the European Union Economy. European Research Studies Journal, 19(1), 93-128.

European Commission Directorate General of Trade 2017. http://ec.europa.eu/trade/policy/countries-and-regions/countries/india/

Europeanscom.eu 2017. Facts and figures on the EU's position in global markets based on EUUSL at AmChinaJapan02550, Eurostat, Unctadhttp://www.europeanscom.eu/eu-position-in-world-trade/

Eurostat 2017. Intra-EU trade in goods - recent trends" http://ec.europa.eu/eurostat/statistics-explained/index.php/Intra-EU_trade_in_goods_-_recent_trends#Intra-EU_trade_in_goods_by_Member_State

Karnups, V.P. 2015. Latvia and India: Economic Relations 1918-1940. In Humanities and

Social Sciences Latvia, 23(2), 37-47.

Koopman, R., Powers, W., Wang, Z. & Wei, S. 2010. Give Credit Where Credit. Is Due Tracing Value Added in Global Production Chains. Working Paper No. 16426, NBER Working Paper Series.

Kowalski, P., *et al.* 2015. Participation of Developing Countries in Global Value Chains: Implications for Trade and Trade-related Policies. OECD Trade Policy Papers, No. 179, OECD Publishing, Paris.

Kumar, A. 2014. Report on Panel Discussion of the book 'India-Poland Relations in the 21st Century: Vistas for Future Cooperation. Indian Council of World Affairs (ICWA), New Delhi.

Liapis, K., Rovolis, A., Galanos, C. and Thalassinos, I.E. 2013. The Clusters of Economic Similarities between EU Countries: A View Under Recent Financial and Debt Crisis. European Research Studies Journal, 16(1), 41-66.

Sambracos, E. and Ramfou, I. 2014. The Effect of Freight Transport Time Changes on the Performance of Manufacturing Companies. European Research Studies Journal, 17(1), 119-138.

Shepherd, B. 2013. The Gravity Model of International Trade: A User Guide. ARTNeT Gravity Modeling Initiative, United Nations publication.

Stancu, I., Vărzaru, M. & Lăzărescu, A. 2014. Helsinki Corridors: Ways of European Expansion and Development. European Research Studies Journal, 17(2), 81-108.

Thalassinos, I.E. and Dafnos, G. 2015. EMU and the process of European integration: Southern Europe's economic challenges and the need for revisiting EMU's institutional framework. Chapter book in Societies in Transition: Economic, Political and Security Transformations in Contemporary Europe, 15-37, Springer International Publishing, DOI: 10.1007/978-3-319-13814-5_2.

World Investment Report 2013. Global Value Chains: Investment and Trade for Development, UNCTAD.

Annex 1. *Decomposition of Gross Exports: Concepts*

Note:

a. (4) are also labeled as VS1* by Daudin et al (2011).

b. (5) is labeled as VS, and (3) + (4) is labeled as VS1 by HIY (2001).

c. (4) and (5) involve value added that crosses national borders at least twice, and are the sources of multiple counting of value added in standard trade statistics.

d. The share of domestic content in a country's exports equals (1) + (2) + (3) + (4)

e. (1) + (2) + (3) divided by gross exports is the VAX ratio for each country's exports to the world defined by Johnson and Noguera (2010).

Source: Koopman et. al. 2010.

***Annex 2.** Intra-EU27 trades, by Member States - total product (%)*

		2008	2009	2010	2011	2012	2013
	EU (27)	100	100	100	100	100	100
1.	**Germany**	19.4	20.1	20.4	20.9	20.8	21
2.	**France**	12.6	13.2	12.8	12.7	12.8	12.6
3.	**UK**	8.7	8.6	8.9	8.6	9.3	9.3
4.	**Belgium**	8.4	8.4	8.3	8.3	8.4	8.2
5.	**Spain**	6.4	6.1	5.9	5.6	5.2	5.1
6.	**Italy**	7.9	8	8.2	7.9	7.3	7.2
7.	**Netherlands**	7.2	7.3	7.3	7.3	7.5	7.5
8.	**Poland**	3.9	3.6	3.8	3.9	3.8	3.9
9.	**Austria**	3.7	3.7	3.8	3.9	3.8	3.8
10.	**Sweden**	3	2.7	3	3.2	3.1	3
11.	**Czech Republic**	2.8	2.8	2.9	3	3	3
12.	**Denmark**	2	2	1.8	1.8	1.8	1.9
13.	**Finland**	1.5	1.3	1.3	1.4	1.4	1.4
14.	**Ireland**	1.5	1.4	1.2	1.2	1.2	1.3
15.	**Greece**	1.4	1.4	1.1	0.9	0.8	0.8
16.	**Cyprus**	0.2	0.2	0.2	0.2	0.1	0.1
17.	**Latvia**	0.3	0.2	0.3	0.3	0.4	0.4
18.	**Lithuania**	0.5	0.4	0.4	0.5	0.5	0.6
19.	**Luxembourg**	0.6	0.6	0.6	0.6	0.6	0.6
20.	**Hungary**	1.9	1.8	1.8	1.9	1.9	2
21.	**Malta**	0.1	0.1	0.1	0.1	0.1	0.1
22.	**Portugal**	1.8	1.9	1.8	1.6	1.5	1.5
23.	**Romania**	1.5	1.3	1.4	1.5	1.5	1.5
24.	**Slovenia**	0.7	0.6	0.6	0.6	0.6	0.6
25.	**Slovakia**	1.4	1.4	1.4	1.5	1.6	1.7
26.	**Bulgaria**	0.5	0.5	0.5	0.5	0.5	0.6
27.	**Estonia**	0.3	0.3	0.3	0.3	0.4	0.4

- *NB. Iceland, Liechtenstein, Norway, Switzerland, Montenegro, Former Yugoslav Republic of Macedonia, the Serbia, Turkey, Croatia data is not available*
- ***Source:** Eurostat: Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Intra-EU_trade_in_goods_-recent_trends*