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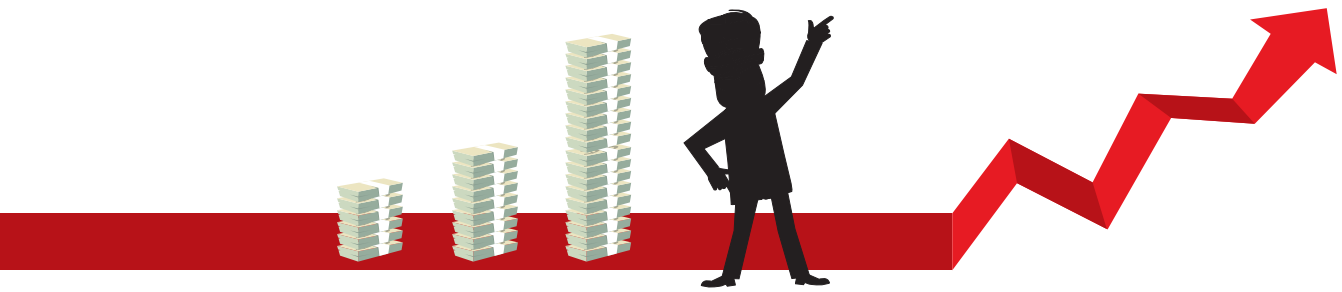
KOSOVOS TRADE WITH THE EU:

Looking Beyond the Stabilisation and Association Agreement



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Kosovo's Trade with the European Union: Looking beyond the Stabilisation and Association Agreement

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ABSTRACT

This study of Kosovo's trade with 28 EU countries over the period 2005-2012 reveals that trade liberalisation on its own will not promote balanced trade and economic development in Kosovo. Unbalanced trade – imports greatly exceeding exports – together with the persistence of historic patterns of exporting and the lack of responsiveness of Kosovo's exports to income changes - either in EU markets or at home - indicate lack of balance in Kosovo's economic development. Namely, dynamism on the demand side (rapid growth in demand for imports) contrasts with lack of dynamism on the supply side (investment in productive capacity and exports). These findings have major implications for the competitiveness and economic development in Kosovo. Other findings have particular policy implications, including the importance of Kosovo's diaspora community in promoting exports. In general, it will require a mix of government policies and firm-specific actions to boost competitiveness and exporting. The Government of Kosovo must create an enabling business environment; provide competitive access to efficient infrastructure services; facilitate reliable and efficient movement of goods to foreign markets; and, ensure product compliance with international quality standards. Furthermore, Government has also a number of essential roles to play in supporting directly the competitiveness of the economy. In the context of businesses, investment should be directed towards productivity-enhancing factors, as they dictate the firm's competitiveness domestically and internationally.

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EXECUTIVE SUMMARY

The aim of this study is to investigate the impact of various factors affecting trade between Kosovo and the EU. The study contributes to the current policy debate on the trade relations between Kosovo and the EU, following the conclusion of the Stabilisation and Association Agreement (SAA) negotiations. The EU uses the SAA mechanism to promote political, economic, trade, and human rights related reforms in the countries aiming at EU membership. In exchange, through trade liberalisation entailed in the SAA, the EU offers tariff-free access to its market, accompanied by technical and financial assistance. Hence, the major component of the SAA process is the negotiation of the trade liberalisation in goods, and partially in services. The SAA will upgrade the existing trade relations between Kosovo, which are based on the Autonomous Trade Measures (ATM) scheme, a EU unilateral time-bound initiative granting duty-free access to 90 per cent of Kosovo goods. The liberalisation is expected to phase out the remaining tariff duties between the trading partners, and place trade relations between Kosovo and the block on a sustainable path.

Once in force (since the SAA is awaiting the approval by the Assembly of Kosovo and the EU institutions), the liberalisation is expected to have a large impact on the domestic producers in terms of the market access, as the EU presents the world's largest market. Furthermore, that liberalisation will induce inflow of foreign capital into the country. For Kosovo these advantages should eventually translate into new jobs, growth, and welfare. However, the utilization and associated benefits of the liberalisation depend on a number of factors. First, SAA does not entail full liberalisation of trade flows. Technical and quality requirements will remain in place beyond the signing of the SAA. In other words, quality requirements and product compliance within the EU will pose a significant challenge for Kosovo producers. Next, and even more important, the benefits of the liberalisation depend largely on the country's internal production capacities. Kosovo's production base, although expanding in recent years, is still very narrow. This is an indication of the underdeveloped private sector and low levels of entrepreneurial activity in Kosovo, both major drivers of competitiveness and exports. Hence, we hypothesize that *the impediments to a greater flow of goods on both sides are not solely related to the free movement of goods*. In the case of Kosovo, impediments can be largely encompassed within the inside-the-border constraints, and that is where the policy targets should be primarily directed. Below, the study recommends an established framework to identify major constraints to private investment and entrepreneurial activity in Kosovo, and

suggests a non-exhaustive list of policy instruments that would have the greatest impact on reducing these constraints and increasing Kosovo competitiveness.

To investigate these relationships, the study utilizes the major toolkit in the field of applied international economics, that is, the gravity model. In its basic form, the gravity model links trade flows directly with economic size (GDPs) and inversely with trade costs (i.e. distance) capturing some deep regularities in the patterns of international trade. In effect, the gravity model is an expenditure equation, whereby the importers' GDP enters the equation to capture the standard income effect, that is, the impact of changes in an economy's income on the quantity demanded of goods and services. In addition, the distance factor enters the equation as a proxy for bilateral trade costs. Finally, the exporter's GDP, in the traditional view represents the export capacity or supply of the country. Beyond this simplistic form of the model, we introduce in the model the historical patterns trade between partners, the role of the Diaspora community in trade exchanges, and the common currency factor. We argue that no currently available specification of the gravity model is capable both of including all the features suggested by recent advances in theory and of being estimated by currently available econometric methods. For our particular task, which is to increase understanding of Kosovo's trade with the EU and of the corresponding policy implications, our particular compromise is to estimate a dynamic model that controls for country-pair effects. We argue that this approach takes account of the dynamics typically omitted from gravity models, thereby taking into account the particular history of Kosovo's trade with EU countries, while at least partly addressing the aspects of trade "resistance" highlighted by recent theory.

An 8-year panel of exports and imports – both aggregated and disaggregated by sector - between Kosovo and the EU has been used in order to investigate trade relations. In addition, the study employs a range of econometric techniques, notably dynamic panel models, to investigate the relationships under investigation. We highlight dynamic Poisson estimation due to a number of features of this approach. It is now well established that Poisson regression is most suitable for estimating gravity models in general. Apart from the ability to estimate with zero observations in the trade matrix (countries not trading with Kosovo), which is a particular problem with Kosovo data, this model accounts for the heteroskedasticity of the error term. Moreover, this model is suitable for estimating a theory-informed gravity model, because of its two key assumptions: correctly specified dynamics, and exogenous regressors.

The results generally confirm what was expected, for both exports and imports respectively. To summarize, the results for exports indicate the following.

- History matters! The models show positive and highly statistically significant coefficients on initial trade conditions and/or lagged trade. The size of both coefficients is rather high, whether we estimate using dynamic linear models or dynamic Poisson regression. The economic meaning of these estimates is that the current pattern of Kosova's exports is not only influenced by the recent past, but even more so by patterns already established in 2005. This suggests a lack of supply flexibility; i.e. possibly deficient capability of Kosovo firms to enter new markets.
- The model gives mixed indications for the income effects on Kosovo exports.
    - The dynamic Poisson model shows the income elasticity of demand for aggregate Kosovo exports to be, on average, zero. Although dynamic Poisson estimates on sector export data as well as the dynamic linear estimates yield income elasticities of demand for Kosovo exports that are, on average, different from zero, these estimated effects are still rather low. Low or zero estimated income elasticities of demand suggest that Kosovo exports commodity types for which demand responds little or not at all to rising income. Even more striking is that statistically insignificant supply elasticities suggest that increases in Kosovo's national income are not generating corresponding export capacity.
- "Distance is alive and well" as an influence on Kosovo exports to the EU countries. The estimated coefficients are almost uniformly significant at the one per cent level and have large magnitudes.
- The Diaspora effects on Kosovo exports are very large. The size of the estimated coefficients indicates the importance of the Diaspora community in exporting to the EU countries where the Kosovo Diaspora is large relative to the EU countries where the Kosovo Diaspora is small in numbers.

On the import side, the following are the major tendencies.

- Once again, history matters! The models yields positive and highly statistically significant coefficients on initial trade conditions and/or lagged trade. These results are consistent throughout models and samples. However, in contrast to the much larger persistence effects noted for exports, the current pattern of Kosovo's

imports reveals considerably less dependence on past patterns and correspondingly greater flexibility on the demand side; i.e. an ability of EU exporters to enter the Kosovo market.

- In terms of income effects, the results are qualitatively in tune with the predictions of the gravity model yet quantitatively different from most estimated gravity models. Overwhelmingly, the income effect on Kosovo's demand for imports is estimated to be very large and highly statistically significant. These estimates reveal that Kosovo has a great hunger for imports; in our preferred dynamic Poisson estimates, increases in imports exceed increases in income by a factor of between three and four. In contrast, exports to Kosovo are not particularly responsive to changes in the income of EU exporters (the estimated elasticities are all statistically significant but lower the one).
- Even for imports, distance matters! The estimated coefficients are almost uniformly significant at the one per cent level and have large magnitudes, albeit, lower than in the case of exports.

The summary of results for both imports and exports suggests that Kosovo trade is not responding fully to traditional trade determinants in the manner of long-established market economies. That is to say that the character of Kosovo trade with the EU contrasts with the character of international trade between more established market economies. Evidence for this is the contrast between the relatively high persistence of historical patterns of exports and the relatively low persistence of historical patterns of imports, which suggests an economy much more dynamic on the demand side than on the supply side. Further evidence for this interpretation is the contrasting statistical relationships between imports and exports on the one hand and changing incomes on the other. Estimated income elasticities suggest an immense hunger for imports in Kosovo, with increases in demand greatly exceeding increases in income. Conversely, Kosovo exporters do not as yet seem able to benefit from what is generally perceived as the greatest driver of exports, namely the growing income of foreign customers. Particularly when it comes to exporting, the econometric investigation indicates that the approach to economic development in Kosovo is not of the kind that stimulates exporting firms and industries. In addition, unusually large estimated negative distance effects are most likely detecting that actual export and import transactions costs between Kosovo and the EU member states are unusually large. As explained, between Kosovo and the EU, trade costs are policy-related, physical and institutional. Finally, the Diaspora effect

suggests that Kosovo exports are responding strongly to other, less usual factors. The latter outcome highlights the importance of personal and community networks, which help to reduce high transaction costs in the trade between Kosovo and the EU countries.

The findings of our gravity model have important implications for policymaking in Kosovo, beyond what can be traditionally considered trade and trade policy related issues. Indeed, the implications place the emphasis on the development and competitiveness of the private sector in Kosovo. The latter is the major ingredient for long-term growth as well as other additional factors instrumental for the development of the private sector. In this context, for a small country such as Kosovo, there is an argument that sustainable growth is driven primarily by exports. Private-sector-led export development has been a vital ingredient to the competitiveness, growth and welfare of many market economies, developed and developing equally. Hence, the removal of barriers to private sector investments and entrepreneurial activity should be paramount to policymaking in Kosovo, as businesses will not invest is risks and uncertainties are high. In order to pin down the major constraints to the private sector development and competitiveness, this study suggests the "growth diagnostics" framework developed by Hausmann et al. (2008). As the framework suggests, in an underperforming economy requiring deep reforms, market imperfections and government distortions are rampant.[3] In the case of Kosovo, notwithstanding other structural problems, low returns to economic activity are primarily a result of institutions and policies related to human resources, electricity supply, corruption, law enforcement mechanisms, property rights, taxation, financial and fiscal stability, resulting in high macro and micro risks in the country.

However, it is almost practically impossible to remove these obstacles at once. Hence, as the "growth diagnostic" framework suggests, policy steps should be prioritized. Indeed, the authors argue that the "growth diagnostic" framework is a strategy to sort out policy priorities in a country. The idea is to identify the most "binding constraints" on economic activity and design a set of policies that will produce the greatest impact. The greatest "binding constraint" on the growth and competitiveness of the private sector and entrepreneurship in Kosovo is constituted by the weak institutional structures.[4] Overwhelmingly, the constraints related to the inadequate institutional environment in

[3] The framework is also known as the Hausmann-Rodrik-Velasco Growth Diagnostics Framework (see Todaro and Smith, 2009).

[4] See the 2013 EU *Progress Report* http://ec.europa.eu/enlargement/pdf/key_documents/2013/package/brochures/kosovo_2013.pdf (accessed on: January 30, 2014).

Kosovo take the form of market distortions, an unfavourable business climate, poor skill composition of labour, poor governance and high level of corruption, poor infrastructure, and so on. Improvement of the quality of institutions would most likely produce the largest positive direct effect on exports and, as a corollary, on growth and welfare in Kosovo.

A non-exhaustive list of policy recommendations provided in this study comprises a mix of actions based on the liberal paradigm that the Government of Kosovo should take in order to increase the competitiveness of the domestic sectors. In the context of behind-the-border policies, measures include actions to improve the business environment, with a view of promoting primarily FDI-enhancing exports. In addition, measures should be directed towards provision of competitive infrastructure services, especially in the energy sector. Further, a significant number of steps should be taken to strengthen the quality assurance institutions, and to raise the awareness of businesses to comply with international product standards. The set of border-in recommendations relate to trade facilitation, including streamlining of border procedures, adoption of risk-based inspections, and removal of other bottlenecks at the border. Finally, beyond-the-border policies include proposals to gain freer access to the regional and EU markets for services. In addition, NTBs, especially TBTs and SPS, are still prevalent even in countries with which Kosovo has free trade arrangements, particularly affecting industrial and agricultural goods.

However, bearing in mind the supply constraints of the Kosovo economy, it is unlikely that such liberal policies are sufficient to increase the competitiveness of domestic industries; hence, the Government of Kosovo has a number of essential roles to play in supporting domestic industries. It is beyond the scope of this study to suggest industrial policy measures to trigger domestic activities. However, drawing on the recent literature on the subject, a set of principles required for the design and implementation of successful industrial policies is provided. The basic principle refers to the right institutional architecture devoid of corruption and rent-seeking.

Finally, the reduction of environmental risks and uncertainties in the Kosovo economy should unleash private sector investments and entrepreneurial activity. These additional investments should have a specific focus: they should be directed to productivity-enhancing mechanisms that determine competitiveness. Hence, a set of suggestions

concerns the need to direct firm investments towards high-skill human resources, capital and new and advanced technologies, productivity-spillovers, and so on.

The results obtained in this study, and the recommendations provided, feed into the current discussion regarding the approach taken, on the one hand, to economic growth and, on the other hand, to trade liberalization and its impact on the economy of Kosovo, specifically on increasing the competitiveness of the private sector. In particular, this study will contribute to discussion regarding the prospective free trade agreements with other countries and Kosovo's WTO accession. On the research side, the gravity model will be used as a tool for policy makers in future to estimate ex-post the impact of different trade-related policies on trade flows.

1. INTRODUCTION

In 2013 Kosovo entered a new phase of relationships with the EU. In early 2013 the European Commission authorized the launch of negotiations on the Stabilisation and Association Agreement (SAA) between the EU and Kosovo. According to the EU, the SAA defines the rights and obligations of parties until full EU membership takes place.[5] The EU uses the SAA mechanism to promote political, economic, trade, human rights related reforms. In exchange, the EU offers tariff-free access to its market, accompanied by technical and financial assistance. The negotiations on the SAA were formally launched on October 28, 2013, and in mid-2014 the Agreement was initialled and now is awaiting formal signing and ratification.

The SAA is a mix of provisions that cover, *first*, the liberalisation of trade in goods and services, and *second*, the institutional reforms required for Kosovo to converge to the EU institutional rules and standards. Regarding the former, the SAA is expected to phase out the remaining tariff duties on goods traded between the EU and Kosovo. As a matter of fact, the EU will abolish all customs duties with Kosovo upon the entry into force of the Agreement, except for a few product lines in the agriculture sector, which are subject to specific duties or tariff-quotas. Kosovo, on the other hand, will abolish completely the customs duties on a number of tariff lines (industrial, agricultural, and fishery products), while for the rest it will reduce the duties progressively within five, seven, and ten years. The SAA deals also with the supply of services; the provisions cover the right of establishment, i.e. the right to undertake economic activities in the territories of the negotiating parties on the Most-Favoured-Nation (MFN) basis. In addition, parties agree to specific provisions on the movement of natural persons, allowing for the movement of the key personnel of the companies established in the other party's territory. Furthermore, in the context of commercial presence, the parties agree to grant the right to use and rent property to their respective nationals (in the case of Kosovo, subject to specific time-bound limitations).

Before the entry into force of the SAA, one should note that Kosovo already benefits from the EU Autonomous Trade Measures scheme, whereby over 90 per cent of products originating from Kosovo enter the EU market duty free. On the other hand,

[5] European Parliament. New horizon for Kosovo's EU integration. Accessed at: http://www.europarl.europa.eu/news/en/news-room/content/20130204IPR05608/html/New-horizon-for-Kosovo's-EU-integration. Accessed on: January 5, 2014.

Kosovo has almost fully exempted capital goods from import duties that originate mainly from the EU. However, the SAA will strengthen further EU-Kosovo trade relations. The liberalisation presents a significant opportunity for Kosovo producers to access the world's largest market. In addition, the Agreement will send a strong signal to potential foreign investors, EU and non-EU, to invest in a country endowed with human and natural resources together with duty-free access to the EU market. For a country plummeted by its recent past into immense economic difficulties, these advantages should eventually translate into new jobs, increase of exports, growth, and ultimately improved welfare.

However, whether the liberalisation with the EU will produce immediate effects for Kosovo remains questionable. First and foremost, duty-free access does not mean full access to the EU market. Quality requirements and compliance within the EU will pose a significant challenge for Kosovo producers. On the other hand, it is doubtful whether foreign investors will take the SAA bait and disregard the huge business-environment problems Kosovo is facing. It is evident that in the current context, at least in the short-run, the liberalisation with the EU may bring more challenges to Kosovo than benefits. Hence, this calls primarily for the so-called inside-the-border policy measures to trigger competitiveness and exporting activities. This is exactly where the current study focuses. Based on the historical data, it investigates the impact of various factors affecting trade between Kosovo and the EU. Primarily, it concentrates on the impact of the "twin forces", i.e. economic masses and trade costs, on the flow of goods between Kosovo and the EU. The study utilizes the so-called Gravity Model approach, which for over fifty years has been the 'work horse' for empirical analysis of the factors determining trade exchange between countries, including trade-related policies. As the literature suggests, the gravity model links trade flows (export, import, or trade flows) directly with economic size (i.e. nominal GDP) and inversely with trade costs (proxied by geographical distance between the capital cities of trade partners), capturing in this way some deep regularities in the patterns of international trade.

The investigation relies on an 8-year panel of exports and imports – both aggregated and disaggregated by sector - between Kosovo and the EU. It employs a range of econometric techniques to estimate the relationships, notably dynamic panel models regarded as best suited for the relationships under investigation. The results indicate that trade flows are heavily dependent on changes in the income levels of both trading partners. A notable exception is the income elasticity of supply for Kosovo exports. The results indicate that

changes in the Kosovo GDP do not affect the exporting potential of Kosovo companies. In other words, the study argues, economic development in Kosovo is not of the kind that stimulates exporting firms and industries. The trade costs factor exerts a large effect on the trade flows, as is usually the case in similar studies. Between Kosovo and the EU, trade costs are policy-related, physical and institutional. Conversely, the effect of the Kosovo Diaspora community in promoting Kosovo exports is large and highly significant. The latter outcome highlights the importance of personal and community networks, which may attenuate otherwise high transaction costs.

The next section concentrates on the background of the problem. The following section presents the methodology employed, including a discussion of the model, data sources and econometric specification used in this study. The final sections respectively present the results, draw conclusions, and present policy recommendations. A short review of the literature on the gravity model and some other specific econometric issues are placed in the Annex 1.

2. THE BACKGROUND

Kosovo's growth performance in recent years has been very promising compared to other countries in the region (see Table 1). However, the 2011 EU *Progress Report* argues that Kosovo's economic growth remains weak and fragile, as a number of macroeconomic instruments deployed did not produce the expected results.[6] The first one concerns the slow growth triggered by public sector spending, although at the same time capital spending created macroeconomic instability by increasing Kosovo's budget deficit. Next, the growth of private sector consumption remained largely unchanged, due to the constant level of remittances, low level of job creation in the economy, and moderate but persistent levels of inflation.[7] When it comes to workers' remittances, as reported in Table 1, net workers' remittances have been increasing steadily over the last five years, but their share of GDP remained virtually unchanged. Worker's remittances have a twofold impact on Kosovo's economy: as the major source of financing domestic demand; and, together with foreign aid, as the major contributor to closing the current account deficit. Finally, private investments have been largely channelled into non-productive activities. For

[6] http://ec.europa.eu/enlargement/pdf/key_documents/2011/package/ks_rapport_2011_en.pdf (accessed on: January 30, 2014).

[7] The drop in the unemployment level in 2012 is a result of the changes in the methodology of calculating the unemployment rate. Many (especially the opposition parties) have dubbed this merely as a populist move by the current Government.

instance, in 2011, over 30 per cent of FDI inflows went into real estate and construction, and another 22 per cent into financial services (EU *Progress Report* 2011). With regards to FDI, net foreign direct investments in 2012 reached only 5 per cent of GDP, a 3 per cent drop from 2011. Prior increases in the inflow of foreign capital over time were associated with the conclusion of privatisation deals rather than FDI going into green-field investments.

Table 1. Kosovo – main macroeconomic indicators

Indicators	2008	2009	2010	2011	2012
GDP (current, mil. €)	3,940.2	4,045.7	4,334.0	4,769.8	5,016.5
GDP growth (annual %)	7.0	3.0	3.0	5.0	3.0
GDP per capita (current, €)	2,255.0	2,297.0	2,441.0	2,663.0	2,777.0
GDP per capita growth (annual %)	6.0	2.0	2.0	4.0	2.0
FDI, net inflows (current, mil. €)	366.7	293.4	367.3	392.6	228.2
FDI, net inflows (% of GDP)	9.0	7.0	8.0	8.0	5.0
Workers' remittances and compensation of employees, received (current, mil. €)	712.1	758.8	752.5	806.3	824.2
Workers' remittances and compensation of employees, received (% of GDP)	18.0	19.0	17.0	17.0	16.0
Unemployment, total (% of total labour force)	48.0	45.0	-	-	31.0
Inflation, consumer prices (annual %)	9.0	-2.0	3.0	7.0	2.0

Source: *World Development Indicators* (2014). http://data.worldbank.org/data-catalog/world-development-indicators

Together with the high level of unemployment, the external position of Kosovo remains the single most challenging issue in Kosovo. Since 1999 the Kosovo market has been flooded by imports, while exports have been negligible. In particular, although growing steadily, goods exports still cover only around 10 per cent of goods imports. Domestic industries are yet to create a presence in export markets, although it seems that the mining sector is taking its traditional leading position.

For a decade, Kosovo's exports have been growing at a high rate, albeit from a very low base (Table 2 shows the recent trends). Exports of goods and services reached a peak of over €950 million in 2011, accounting for around 20 per cent of GDP. However, imports in 2011 exceeded €2.7 billion, equivalent to over 57 per cent of Kosovo's GDP. Imports have been growing at a slower pace of around 20 per cent in the last few years. The

average coverage ratio of imports, i.e., exports of goods and services as a percentage of imports, over the past three years stands at around 35 per cent.

Table 2. Kosovo – international trade indicators

Indicators	2008	2009	2010	2011	2012
Overall openness (%)	67.9	68.9	75.3	77.7	71.0
Exports of goods and services (current, mil. €)	543.7	658.7	829.5	959.1	918.9
Goods exports (current, mil. €)	120.1	174.7	298.1	317.2	281.8
Service exports (current, mil. €)	423.7	483.9	531.4	642.1	637.1
Exports of goods and services (% of GDP)	13.8	16.3	19.1	20.1	18.3
Imports of goods and services (current, mil. €)	2,131.7	2,129.5	2,433.5	2,749.4	2,644.1
Goods imports (current, mil. €)	1,854.4	1,833.0	2,034.9	2,364.4	2,327.3
Service imports (current, mil. €)	277.4	296.5	398.5	385.0	316.7
Imports of goods and services (% of GDP)	54.1	52.6	56.1	57.6	52.7
Trade balance on goods and services (current, mil. €)	-1588.0	-1470.8	-1604.0	-1790.3	-1725.2
Trade balance in goods (current, mil. €)	-1734.4	-1658.3	-1736.8	-2047.2	-2045.5
Trade balance in services (current, mil. €)	146.3	187.4	132.9	257.0	320.4

Source: *World Development Indicators* (2014). http://data.worldbank.org/data-catalog/world-development-indicators

The aggregate trade situation, however, conceals a significant difference between trade in goods and trade in services. In the goods sector, the persisting negative balance of trade has recently exceeded the €2 billion mark. Another discouraging sign regarding the trade in goods is the low degree of export diversification and the predominance of low value added goods, such as base metals and minerals (together constituting about 75 per cent of total exports in 2011). The share of goods exports in GDP rose from 3 per cent in 2008 to 5 per cent in 2012. In contrast, the services sector has been performing reasonably well. Kosovo has experienced a positive trade balance in services since 2006. Table 2 reports a positive trade balance in services of €320 million euros for 2012, up from 146 million euros in 2008.

There are indications that the transport, travel services, information technology, and the construction sector have been quite active in serving export markets. However, the biggest contribution to the exports of services relates to sales of services to foreign firms and persons residing in Kosovo, the so-called virtual exports. The share of exports of services grew from 10.7 per cent of GDP in 2008 to 12.7 per cent in 2012.

The major trade partners, for both imports and exports, have been the neighbouring countries and the EU countries. In the region, Serbia and Macedonia have been the main partners, although Albania is becoming a more important trading partner with recent infrastructure developments. On the other hand, all 28 EU member states have exported to Kosovo at one time or another, whereas Kosovo exports to a number of the EU countries are still virtually zero (for instance, Malta, Luxemburg, Estonia). The major trading partners are similar for both exports and imports: Germany, Italy, Greece, Slovenia, and Belgium, all feature in both the export and import lists as the biggest trade partners of Kosovo (see later discussion).

There is a long list of factors bearing on this complex situation: inherited industrial structure; weak private sector; delayed privatization of socially-owned assets; poor performing institutions; low inflow of foreign direct investments; poor quality infrastructure; and the high cost of finance are just a few. Furthermore, political risks, primarily related to uncertainties over the recognition of the political status of the country) and instability (the weak internal political structures) have been a major obstacle to economic development, including the external sector. Moreover, some problems are related to policies applied by other countries, for instance subsidization of domestic industries or other forms of supporting domestic industries. Furthermore, some are firm specific such as the typically low level of productivity, which is also related to the external weaknesses mentioned above.

Faced with a persistent huge negative trade balance in goods, Kosovo policy makers have been considering various options on how to overcome this situation. The Government of Kosovo has undertaken a number of policy and institutional steps to support the strengthening of the export sector. A direct measure has been the adoption of the Trade Policy of Kosovo in 2009 (henceforth, the Policy). The Policy proposes a number of measures to improve the performance of the export sector in Kosovo, including further trade liberalization (e.g., negotiating new free trade agreements). In addition, the Policy recognizes that improving export performance requires a wider approach to reforms, especially policies aimed at developing and coordinating sectorial policies (agriculture,

industry, and services). Finally, the Policy argues for a specific design of trade related institutions, in particular the creation of coordination mechanisms in order to facilitate the design and implementation of trade policy.

So far, coordination mechanisms are in place dealing mainly with sectorial as well as trade facilitation issues. Another institutional dimension of trade is the legislative framework, which has been almost completed; the new Law on External Trade was adopted in 2011. In addition, the Customs and Excise Code of Kosovo has been amended in 2012 to cover procedures of the authorized economic operators, risk assessment, complaint procedures and administrative offences. The legislation on contingency measures (anti-dumping, countervailing measures, and safeguards) was also amended in 2014 to include the best international practices.

Otherwise, the trade regime of Kosovo is fairly simple. It applies only two import tariff rates, namely zero and 10 per cent rates, respectively. Most of the raw material and machinery going into the production process is exempt from tariff duties. Non-tariff instruments are virtually non-existent.

Kosovo has undertaken significant steps in accessing major markets for its businesses. Trade with its two major trading blocks, namely the neighbouring Western Balkan countries and the EU, has been almost fully liberalized.[8] Trade relations with neighbouring countries are conducted under the framework of the CEFTA Agreement. Within this framework, countries of the region have negotiated a duty-free access for goods, while services are currently being negotiated (to be concluded in early 2016). On the other hand, Kosovo – EU trade relations have been arranged through preferential treatment status granted by the EU to Kosovo products since 2000. After ten years in force, in January 2011, these measures were suspended due to political considerations within the EU block (mainly by the opposition of five EU countries who have not recognized Kosovo). Eventually the EU overcame the impasse and the preferential treatment of Kosovo goods resumed in January 2012. In June 2013, the European Council endorsed the recommendation by the European Commission to start negotiating a SAA with the Kosovo authorities. The negotiations started in the fall of 2013, with the liberalisation of movement of goods being the major part of the Agreement. As pointed

[8] Less than 20 per cent of trade is conducted with countries outside these two trading blocks, notably Turkey and China. In October 2013 Kosovo signed a FTA with Turkey. The entry into force of the Agreement awaits ratification by the respective Parliaments.

out, the SAA presents a significant opportunity for Kosovo producers to access the world's largest market. In addition, it will send a strong signal to potential foreign investors. In mid-2014, the text of the Agreement was agreed and initialled. The agreement now awaits ratification from the respective parties (more details on the agreement see Box 1).

Box 1. The negotiated SAA between the EU and Kosovo

As pointed out, the SAA emphasises the movement of goods and services and the need for convergence through institutional reforms in Kosovo. Initially, the SAA sets out general provisions, followed by specific provisions on the on-going political processes in Kosovo and, finally, it sets out requirements for Kosovo on both regional and wider economic cooperation (Title I – III). Further, the SAA concentrates on the Free Movement of Goods (Title IV); Establishment, Supply of Services and Capital (Title V); Approximation of Kosovo's Laws to the EU *Acquis*, Law Enforcement and Competition Rules (Title VI); Justice, Freedom and Security (Title VII); Cooperation Policies (Title VIII); Financial Cooperation (Title IX); and Institutional, General and Final Provisions (Title X). In what follows, a summary of the provisions of the SAA regarding goods and services is provided.

Liberalisation of goods

In the context of the free movement of goods, the parties have agreed on the following:

- Gradually establish a bilateral free trade area over a period lasting a maximum of 10 years starting from the entry into force of the Agreement;
- For industrial products originating in Kosovo, the EU has agreed to abolish customs duties and quantitative restrictions on imports, and measures having equivalent effect, upon the entry into force of the Agreement;
- For industrial products originating in the EU, Kosovo has agreed to remove customs duties progressively within five and seven years following the date of entry into force of the Agreement (or 1 to 2 per cent each year), while all quantitative restrictions, or measures having equivalent effect, will be removed upon the entry into force of the agreement;
- For agricultural products originating in Kosovo, the EU has agreed to abolish all customs duties upon the entry into force of the Agreement, except six headings within the Combined Nomenclature, which in broad terms include some types of live animals, meat, and sugars and related products. A specific tariff-quota will be applied on baby beef;
- The EU will abolish all quantitative restrictions, or measures having equivalent effect, on

agriculture and fishery products originating in Kosovo;

- For fishery products originating in Kosovo, the EU has agreed to abolish all customs duties except for trout and carp which are subject to tariff quotas;
- For agricultural products originating in the EU, Kosovo will abolish all quantitative restrictions, or measures having equivalent effect, while, regarding the customs duties the following has been agreed:
    - Eleven tariff lines have been excluded from the negotiations, and the 10 per cent *ad valorem* tariff rate will be applied. Broadly, these lines cover milk and related products, potatoes, apples (cider), and wine;
    - For other agricultural products, Kosovo has agreed to reduce customs duties progressively in three different time frames, depending on the sensitivity of products, that is, within five, seven, and ten years, respectively (either 1 or 2 per cent each year);
- For fishery products originating in the EU, Kosovo has agreed to abolish customs duties for all products except for two tariff lines, trout and mackerel. For the latter products, the reduction will be progressive, for 5 and 7 years (1 or 2 percent annually);
- Due to the sensitivity of processed agricultural products a specific protocol has been agreed (see Protocol 1). The Protocol lists goods with a duty set to zero for EU imports from Kosovo, and it also lists products originating in the EU, in which case Kosovo has agreed to remove customs duties progressively within five, seven, and ten years following the date of the SAA entry into force. Three tariff lines (types of yogurt) have been exempted from the SAA negotiations altogether, and EU products will be subject to a 10% tariff rate;
- Protocol 2 sets out provisions that govern the flow of products of wine and spirit drinks between Kosovo and the EU. The EU will apply tariff quotas on certain Kosovo wines, while Kosovo will reduce progressively the duties on wines;
- Beyond the tax concessions granted on industrial and agriculture products, in the context of free movement of goods the SAA covers a number of clauses, such as: on safeguard of agriculture and fisheries; on protection of geographical indications; then on fiscal discrimination; dumping, subsidies, and safeguards; shortages; state monopolies; rules of origin; etc.

Liberalisation of services

The provisions regarding the liberalization of services are outlined under Title V: Establishment, Supply of Services, and Capital. The Agreement sets out provisions regarding the so-called four modes of supply of services as defined by the WTO General Agreement on Trade in Services (GATS). The four GATS modes of supply are: cross-border supply of services; consumption

abroad; commercial presence; and, presence of natural persons. The following are some important highlights of the agreement in the context of services:

- Regarding the right to undertake economic activities by means of the setting up of companies, including subsidiaries and branches, Kosovo and the EU agree to grant Most-Favoured-Nation treatment to the respective service providers;
- In the context commercial presence, parties have agreed on:
  - Subsidiaries and branches of EU companies shall have, from the entry into force of the Agreement, the right to use and rent real property in Kosovo;
  - However, as in the case of Kosovo companies, subsidiaries and branches of EU companies shall, within five years from the entry into force of this Agreement, have the right to acquire ownership rights over real property when these rights are necessary for the conduct of the economic activities for which they are established;
- Concerning the presence of natural persons, companies established in the respective parties' territories are entitled to employ workers who are nationals of the EU or Kosovo respectively, provided that these employees are key personnel of the company, i.e. personnel in management positions or those who possess specialized knowledge;
- Chapter IV, under the current Title, covers provisions on current payments and movement of capital.

However, the complete picture on the welfare impact of the liberalisation with the EU remains not entirely clear. A number of scenarios assessing the fiscal impact of the SAA have recently been produced. In this context, the sensitivity of imports at the 2-digit NACE level has been also been investigated (Linotte et al., 2013).[9] However, the impact of the liberalisation with the EU on consumption and employment remains a puzzle due to the lack and reliability of data. The current study looks beyond these effects, as it attempts primarily to unearth the so-called "inside-the-border" policy measures needed to activate the export potential in Kosovo. With 80 per cent of trade liberalised, the resolution of the trade deficit burden should be sought in Kosovo's own backyard.

3. Empirical Analysis

3.1 The Model and Hypotheses

[9] Linotte et al., (2013), Preparing Kosovo for the Trade Aspects of the Stability and Association Agreement Negotiations with the EU. A part of the EU funded project "Further Development of Kosovo's Trade Policy" implemented by the GFA Consulting Group/ACE/CARDNO.

This study utilizes the major toolkit in the field of applied international economics, that is, the gravity model (for a short review of the gravity model see Annex 1). The latter model has been applied in the context of different theoretical trade frameworks, including Ricardo's and Heckscher-Ohlin comparative approach as well as later theoretical frameworks in international trade. Furthermore, it has been used extensively to determine ex-ante and ex-post the effects of the trade and other policy mechanisms. Moreover, it has been used in different sector and country settings.

Peci et al. (2010) is the only published paper applying a gravity model in the case of Kosovo. Our study differs in a number of ways to this paper. *First*, while Peci et al. (2010) covers a greater number of trade relationships (the present study is restricted to trade with EU countries), it investigates only 2008 data, resulting in a small number of cross-section observations at the aggregate (country) level. Our study is based on a panel of trade data, comprising annual observations between 2005 and 2012. Moreover, we investigate both aggregate and HS 2-digit sectorial trade flows, which provides a check on the robustness of the results obtained. *Second*, our study builds upon recent advances in the theoretical modelling of gravity equations. In this context, as far as possible our modelling approach takes account of multilateral trade resistance factors. In particular, we employ dynamic econometric techniques, which account for the history of trade flows. In addition, we estimate a dynamic Poisson model that takes into account zero trade flows. The latter takes centre stage in recent discussions regarding the methodological appropriateness of gravity models that do not take into account zeros in the trade matrix. Furthermore, our study addresses any concerns regarding potential endogeneity in the model. *Third*, there are differences between the two studies with regards to the variable definitions. A notable feature of Peci et al. (2010) shared with the present study is the trade promoting effect of diaspora communities. However, while Peci et al. (2010) define the Diaspora effect using a dummy for Germany and Switzerland, in our specifications the Diaspora dummy covers eleven countries for which remittance data is sufficiently large to be recorded. While both proxies are far from perfect, it is much more likely that the two-country dummy will pick up country specific effects affecting trade exchanges beyond the Diaspora community effect.

Typically, the standard procedure for estimating a gravity model is a simple transformation of variables into natural logarithms. Following Anderson and van Wincoop (2003), this generates a theory-consistent gravity equation of the log-linear form:

$$ln\, X_{ij,t} = \hat{\beta}_0 + \hat{\beta}_1\, ln\, GDP_{i,t} + \hat{\beta}_2\, ln\, GDP_{j,t} + \hat{\beta}_3\, ln\, t_{ij,t} + \hat{\beta}_4\, ln\, \Pi_{i,t} + \hat{\beta}_5\, ln\, P_{ij,t} + \epsilon_{ij,t}$$

where, in this study, *i* refers to Kosovo, *j* indexes 28 EU trade partners (j = 1,…, 28) and *t* indexes the time dimension (*t* = 1,…, 8). Further:

X_{ijt} – exports from country *i* to country *j* in year *t*

GDP_{it} and GDP_{jt} – GDPs of countries *i* and *j* in year *t*;

t_{ijt} – cost in *j* of importing a good from *i* in year *t*, which is proxied by the distance between the two countries;

Π_{it} and P_{jt} – country *i*'s outward and country *j*'s inward multilateral resistance terms in year *t* (for explanation of these terms, see Annex 1);

β_0 … β_5 are parameters to be estimated (to be estimated is signified by the accent ^) which, when variables are transformed into natural logarithms (signified by *ln*), measure constant elasticities (e.g. the estimate of β_2 measures the average percentage change in country *i*'s exports in response to a percentage change in country *j*'s national income – i.e. the income elasticity of demand for Kosovo exports); and

ε_{ijt} is the usual error term.

Here, the gravity model is set out to estimate the determinants of exports. The same model can be reformulated to estimate the determinants of import to country *i* from country *j* in year *t*. The variable and other definitions remain unchanged.

Before we turn to some of the limitations of the current model (see the next section), let us concentrate on discussing ingredients of the equation, and the modelling choices we make in the current study. Starting with the selection of the dependent variable, the literature states that a number of alternatives can be used, such as total trade, export flows, import flows, or average bilateral trade flows. The choice, it is argued, should be based on firm theoretical considerations. De Benedictis and Taglioni (2011), Shepherd (2013), and others, argue that the unidirectional import and export data should be used, as other choices are likely to produce misleading results. We employ the latter, meaning that each line in the database represents a single flow, either exports from Kosovo to some EU country or imports from some EU country to Kosovo in a particular year (variables respectively denoted as *ex_ks* and *im_ks;* see Table 3) together with the corresponding value of each of the independent variables on the right-hand side of the above gravity equation. Table 3 also includes two additional variables believed to be potentially important influences on Kosovo's trade, which augment the model set out

above: a dummy variable for those trade flows with an EU country hosting a substantial diaspora community from Kosovo; and a dummy variable for those trade flows where both partners use the euro (i.e. where trade is conducted in a common currency). The sign of the anticipated trade effect of each variable is noted in the final column of Table 3.

Table 3: Variable description

Variables	Description	Exp. sign
Dependent variables		
im_ks	The monetary value of imports from the EU to Kosovo, €	/
ex_ks	The monetary value of exports from Kosovo to the EU, €	/
Independent variables		
imp_gdp	Nominal GDP of the importing country	(+)
exp_gdp	Nominal GDP of the exporting country	(+)
dis_km	Distance in kilometres between capital cities	(–)
comc	Dummy for countries which have introduced € as a national currency	(?)
rem	Dummy for the eleven EU countries with the largest proportions of the Kosovo Diaspora (Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Slovenia, Sweden, UK). These are the countries for which remittance data is sufficiently large to be recorded. Those EU countries from which no significant remittance flows are recorded are assumed to have no substantial Diaspora communities.	(+)

As discussed earlier, the gravity model is in effect an expenditure model, whereby the importer's GDP influences the expenditure in the country of destination, i.e. in our case, the total demand in the EU countries for Kosovo's exports; while the exporter's GDP influences the supply in the country of origin, i.e. the total amount Kosovo exporters are willing to supply the EU market. The theory suggests that both GDP variables should relate positively to the trade flows between countries. In this first case, that is, the importer's GDP (*imp_gdp*), the theory suggests a positive relationship between increasing income and bilateral trade flows. In a small country setting (as in case of Kosovo, a price taker in international markets), according to a partial equilibrium framework an increase in the importing country's income will shift the demand curve in the importing country. The resulting increase in the quantity demanded on the home market triggers an

increase in quantity supplied from the world market. Seen from the perspective of the EU, the relationship is different as the EU, one of the largest economies in the world, is a price setter in the world market. Hence, increases in EU income would be reflected by increase of demand that would be satisfied by home suppliers as well as by imports from internationally competitive players (including, presumably, Kosovo producers/exporters).

In the case of exporter's GDP (*exp_gdp*), an increase in the country's income raises domestic demand. Increased demand in turn not only drives up the domestic price but also helps increase the world price of the particular good (in a partial equilibrium setting, this would apply to the EU as a price setter in the world market). A higher price of a good, generating potentially a higher level of revenues, induces greater activity/ production on the part of the producer/exporter. This increases the levels of bilateral trade, reflected in a form of positive relationship between the exporting country's income and bilateral trade. Seen from Kosovo perspective, a small player in the world market, hence a price taker, increase in the level of income should be seen through the prism of increase in the level of productivity and competitiveness of domestic players. In other words, increases in the country's income will improve the quality of institutions, create a more conducive business environment, better infrastructure, etc. that will, in turn, enhance the export or supply capacity of the country through increased productivity and competitiveness of the enterprise sector.

The distance factor enters the equation as a proxy for bilateral trade costs (*dis_km*). As Jacks et al. (2008) explains, bilateral trade costs include transaction costs associated with the exchange of goods across national borders. Anderson and van Wincoop (2004) break the trade costs into transportation costs (freight and time costs); policy barriers, such as tariff and non-tariff barriers; information costs; contract enforcement costs; costs associated with different currencies; legal and regulatory costs; and local distribution costs. The theory predicts that the greater the distance the greater are the costs of international transactions. Hence, the expected relationship between the distance and bilateral trade flows is negative. In other words, an increase in prices resulting from an increase in transaction and transport costs will induce a fall in quantity demanded, and with that a reduction in bilateral trade between countries.

The gravity equation has been augmented to incorporate numerous trade and other policy variables (see Annex 1). We were unable to include most of them, bearing in mind that Kosovo does not share some common specific geographical or historical features

with the EU that have been introduced in other empirical gravity models. However, following the war in 1999, in the context of the peace process, Kosovo decided to introduce the Euro as legal tender. As a result, in the study we introduce a dummy taking the value of one for each trade flow with an EU country that has adopted the Euro (*comc*), otherwise zero. The impact of a common currency on international trade flows has been a subject of extensive research. In particular, the currency union within the EU triggered a stream of research on this topic. Most research has acknowledged the positive impact of a common currency on trade flows. The reasoning is as follows: exchange rate volatility increases the degree of uncertainty in international trade, and with that also the costs of international transactions. Rose (2000) and Frankel and Rose (2002) utilize gravity models to assess the effects of exchange rate volatility and currency unions on trade. In a sample of 200 countries, they show a major positive impact of a common currency on trade and income. However, a recent meta-regression analysis of this literature finds that "the euro's trade-promoting effect is insignificant" (Havranek, 2010, p.241). Accordingly, the anticipated effect of this variable is noted as uncertain (?) in Table 3.

An important addition to the model is the Kosovo Diaspora in the EU. Many studies associate Diaspora/migration and remittances with the alleviation of poverty and economic development in the country of origin. Among a number of channels as to how this is achieved, the literature provides strong evidence on the robust positive correlation between trade and migration. Parsons (2012) summarizes the discussion on the trade-migration nexus; following Gould (1994), he explains that the literature has identified two channels through which Diaspora or migration foster trade between the country of residence and the country of birth/origin: *first*, is through reduction of the transaction costs of trade; and *second*, via simply demanding domestically produced goods. The first channel is particularly important, and warrants further attention. Diaspora/migrants face no language barrier, as they are often bilingual. They are in tune with the legislation in both countries, and may have the necessary knowledge of the available products in both countries. Further, Diaspora/migrants are ideally positioned to promote contacts and networking between buyers and sellers, thereby overcoming informational asymmetries and lowering the transaction costs of trade. Accordingly, a dummy variable has been introduced into the model that encompasses the EU countries with the largest proportions of the Kosovo Diaspora (*rem*).

We include in the model variables to account for historical patterns of trade (we introduce in the model the first lagged values of the dependent variable and, in our preferred specification, the initial condition variable - i.e. the level of trade in the first period of the sample - as well). We have strong reasons to believe that Kosovo's past patterns of trade still persist, or at least influence current patterns of trade. Both theory and empirical evidence suggest that history plays a significant role in shaping international trade flows (De Benedictis and Taglioni, 2011, p.85). In their seminal work, Eichengreen and Irwin (1998, p. 55) support strongly this view; according to them, countries with a history of trading with one another continue to do so either for political, policy, or other related reasons. They pinpoint a number of shocks (e.g. war, depression, temporary tariff, real exchange rate shock, etc.) that have a bearing on the future bilateral patterns of trade. Drawing on these accounts, the authors argue that changes in trade flows can produce effects with significant persistence. Analysing the evolution of trade between 1949 and 1964 through a gravity model, the authors argue that the omission of historical factors is likely to bias estimated trade effects, in particular exaggerating the impact of trade policy instruments (such as trade agreements). Their findings lead the authors to the following conclusion (p. 56):

> The implication is that we will never run another gravity equation that excludes lagged trade flows. If our paper is successful (and widely read), neither will other investigators.

The firm-level evidence, theoretical and empirical, supports widely the position of Eichengreen and Irwin. For instance, the learning theory – rooted in the behavioural theory of the firm – argues that development of knowledge and its renewal with regard to domestic and foreign activities may have an impact on perceptions about opportunities offered by further internationalisation (see Clercq et al., 2005). In addition, a recent strand of international trade literature has been developed linking firm heterogeneity and participation in foreign markets. This approach, initiated by the pioneering work of Melitz (2003), argues that the firm's export entry and exit decisions are determined by the interplay of two factors: firm-level variation in productivity; and sunk costs. According to this line of thinking, as Helpman et al., (2008, p. 443) explain, firms enter and exit international markets depending on the productivity differences. According to them, only more productive firms find it profitable to export. Profitability, the argument goes, varies by destination; it is higher for exports to countries with higher demand levels and lower variable and fixed export costs. Empirically, export experience has been used on several occasions to explain patterns of firms' entry and exit strategies

in the presence of sunk costs. In a 9-year panel of Columbian manufacturing firms, Roberts and Tybout (1997) find that prior export experience increases the probability of exports by up to 60 per cent. Similarly, Bernard and Jensen (2004), in a 12-year panel of US manufacturing firms, find that exporting today increases the probability of exporting tomorrow by 39 per cent. In addition, Bernard and Wagner (1998) in a panel of German manufacturing firms find that previous export experience increases the likelihood that the plant will export in future by almost 50 per cent.

Finally, in this study, within the limitations imposed by the overriding imperative to estimate dynamic models, we control for multilateral trade resistance (Π_{it} and P_{jt}) by estimating dynamic models specified with country-pair effects - included in a composed error term – while addressing the associated problem of the non-exogeneity of the lagged dependent variable. In addition, we estimate trade effects conditional on year/period dummies (omitting only the first, so that all period effects are estimated relative to the omitted base period). These control for time-varying multilateral trade resistance effects to the extent that these are similar across the country pairs. The difficulties and consequent trade-offs involved in modelling both dynamic effects and multilateral trade resistances are discussed in Annex 1.

3.3 The Data

The study primarily utilizes the database of external trade statistics, an 8 year-panel (longitudinal) source provided by the Statistical Agency of Kosovo. The annual data cover the period from 2005 until 2012. During this period, the dataset provides high quality and detailed information with regards to Kosovo aggregate trade with the rest of the world. We do not use data prior to 2005, because it is known to be unreliable. In addition to aggregate data, the database provides disaggregated data at the sectorial level for both exports and imports according to both HS and SITC (Rev. 4) classifications. For both, the level of disaggregation is very high, going up to eight digits. For the purpose of this study, we will be using data disaggregated at the 2-digit HS level.

The study utilizes other data sources for the nominal GDP of the exporting and the importing countries as well as the distance between capital cities.[10] For the former, the analysis uses World Bank World Development Indicators statistics. The distance measure is obtained from the web-based platform "viamichelin.com", measuring kilometre

[10] It is now widely accepted that the nominal variables are to be used in the gravity equation.

geographical/ physical distance between capitals.[11] Remittance data are obtained from the Central Bank of Kosovo. Because remittance data is collected only for those countries from which substantial remittances are received, it was used to create a dummy variable (see Table 3 above).

4. RESULTS

First we report descriptive statistics to give context to the econometric results. Next, we discuss in turn each variable of the model. Note that the discussion of the outcomes will rely on the dynamic Poisson model, but we will also refer to the dynamic linear model estimates.

4.1 Descriptive Statistics

The following table presents some important statistics for variables included in the model. In addition, the charts below present the flow of imports and exports over time for the most important EU trade partners (see also charts A1 through A4 in Annex 3, presenting the flow of imports and exports over time, and the average 8-year values of imports and exports for each EU member state). On average, over the period 2008-2012, the value of imports was almost nine times larger than the value of exports. The data show that all 28-member states have exported to Kosovo at one time or another in the last decade, whereas Kosovo exported to the majority of EU countries. The major trading partners are similar for both exports and imports. The biggest exporter to Kosovo has been Germany with over €1.7 billion over the last 8 years, followed by Italy with just under €800 million for the same period, and Greece with over €600 million. Regarding exports, data show that over the last 8 years Italy has been by far the major EU market for Kosovo goods with €335 million, followed by Germany with around €100 million, and Belgium with €55 million.

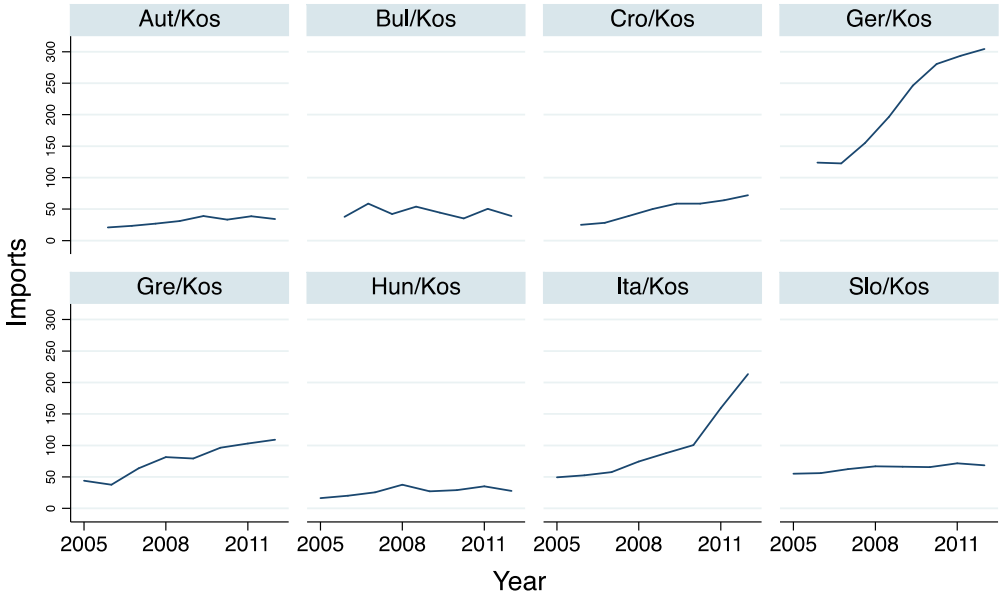
Table 4. Summary statistics for aggregate data

Variables	Mean	St. dv.	Min	Max	Fractions	
					1	0
Dependent variables						
Imports to Kosovo (mln.)	27.1	47.8	0.0004	304.0	-	-
Exports from Kosovo (mln.)	3.1	10.2	0	8.4	-	-

[11] See www.viamichelin.com (accessed on: November – December 2013).

Independent variables						
Kosovo GDP (bn.)	3.9	0.6	3.0	4.8	-	-
EU countries' GDP (bn.)	436.0	659.0	4.9	2,650.0	-	-
Distance (km)	1,706.7	829.3	286	3,504	-	-
Common currency	-	-	-	-	75.9	24.1
Diaspora	-	-	-	-	39.3	60.7

Chart 1. Major EU import partners (mil €, 2005-2012)

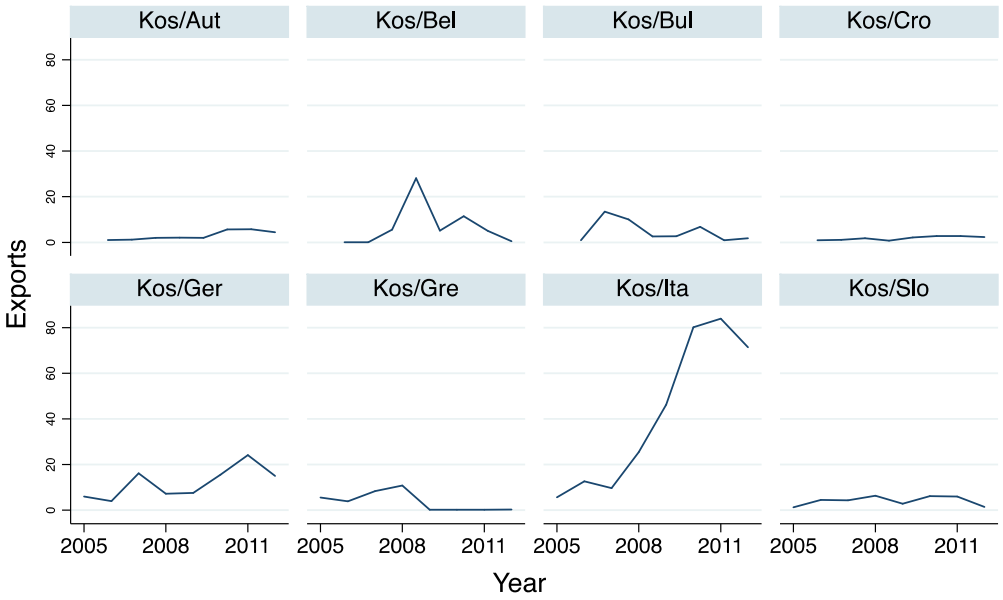


Source: Kosovo Agency of Statistics (2014)

There are a wide variety of products imported from the EU. From 2005 until 2012, hi-tech products, such as machinery, vehicles, and electrical appliances, dominate the structure of imports. Further, other imports are concentrated on products such as petrol and oil derivatives, food products, wood, plastics, and other categories of goods. On the other hand, unfinished mineral products dominate exports from Kosovo, including scrap iron and steel, copper, aluminium, zinc, and nickel. In total, over the 8-year period, Kosovo has exported approximately €500 million of these commodities. Other exported goods include agricultural products, food, hides and skins, and also some textile products. There are only eight 2-digit HS categories in which Kosovo has a positive trade balance over the 8-year span. The iron and steel scrap and ore category records the largest surplus in trade, at over €300 million. Other minerals follow, such as copper and lead,

with a trade surplus of around €50 million and €4.5 million, respectively. Raw hides, skins, and other related leather products account for a rather large surplus of around €35 million over the eight year period.

Chart 2. Major EU export markets (mil €, 2005-2012)



Source: Kosovo Agency of Statistics (2014)

Worldwide, a significant fraction of trade takes place within the same industries. A widely used measure of the significance of intra-industry trade is the Grubel-Lloyd index (for more details on the index see WTO, 2012). The Grubel-Lloyd index takes values from 0 to 1, where zero means a one-way trade, either exports or imports, whereas closer to unity means greater similarity in trade flows. Table 5 reports the Grubel-Lloyd indices for the seven industries for which the index exceeds or comes close to 0.5. Only in four industries is the intra-industry trade index above 0.5, confirming the argument that only similar countries (in terms of GDP) share more intra-industry trade.

Table 5. Intra-industry trade: Grubel-Lloyd index

HS chapter	2005	2006	2007	2008	2009	2010	2011	2012	Average	Trade balance (mil. €)
76	0.975	0.557	0.666	0.827	0.849	0.743	0.635	0.226	0.685	-29.2

47	0.823	0.559	0.725	0.713	0.294	0.499	0.712	0.516	0.605	-2.4
07	0.998	0.550	0.512	0.381	0.331	0.535	0.452	0.735	0.562	-13.7
72	0.461	0.946	0.803	0.882	0.490	0.243	0.237	0.322	0.548	-37.6
40	0.056	0.420	0.418	0.740	0.697	0.611	0.541	0.413	0.487	-6.5
79	0.526	0.805	0.164	0.177	0.413	0.140	0.489	0.949	0.458	-17.3
25	0.000	0.171	0.226	0.768	0.781	0.862	0.664	0.016	0.436	-29.2

Note: HS designations:

76: Aluminium and articles thereof
47: Pulp of wood, waste and scrap of paper
07: Edible vegetables
72: Iron and steel
40: Rubbers and articles thereof
79: Zinc and articles thereof
25: Salt, sulphur, earth and stone, lime and cement

The Grubel-Lloyd index should be interpreted cautiously, as the index rises with the level of aggregation of the industries analysed (to make most sense, the index should be calculated at a fine degree of product disaggregation). In addition, it doesn't say much about the value of goods flowing on both directions (see the negative trade balance for these products in the final column). However, when discussing intra-industry trade, one should keep in mind the following (which is indicative of the Grubel-Lloyd index): *first*, as the level of integration progresses (for instance, with the SAA liberalisation), it will stimulate vertical trade between Kosovo and the EU, that is, trade in goods with comparative advantages. *Second*, as Kosovo converges in size with the EU average, this will spur horizontal trade, that is, trade in similar but differentiated goods. The Grubel-Lloyd index will be useful to track these changes over time.

4.2 Empirical Findings [12]

4.2.1 The Role of History

Whether we estimate models on the export or import data, we find positive and highly statistically significant coefficients on initial trade conditions and/or lagged trade. Apart from the coefficient on lagged trade in the dynamic Poisson estimates for aggregate exports, although this is more or less borderline with respect to statistical significance at conventional levels, all other coefficients relating to historical influences are consistent with respect to sign

[12]Before we begin interpreting the results, readers are advised to look in Annex 2 for a discussion on the specifics of the interpretation of the results and the econometric specification of the Dynamic Poisson Model, including a discussion on the preferred specification of our model.

and mostly statistically significant at the one per cent level. These findings confirm our preference for the dynamic modelling of Kosovo trade (see Tables 8 through 11).

For aggregate exports (Table 8, Column 2), if exports in 2005 to a EU country had been one per cent higher, then the estimated coefficient of 2.29 on this initial condition suggests that - other factors held constant - Kosovo exports to this specific country in each year in the sample would subsequently have been almost €23 million higher (reflecting rescaling to units of €10 million; this applies to all Dynamic Poisson estimations). In contrast, the coefficient on the lagged dependent variable suggests that a one per cent increase in trade *in the previous year* causes an increase in the current year of €2.3 million. At sector level, the estimated coefficients both suggest larger export effects: for one per cent higher initial exports in a particular sector, the coefficient of 13.80 suggests subsequently increased exports of €138 million; while the coefficient of 0.75 suggests a high level of persistence at the sectoral level, with a one per cent increase in the previous year's trade causing on average an increase in the current year's exports of €7.5. The dynamic linear estimates of the initial conditions and lagged dependent variables reported in Tables 8 and 10 are qualitatively similar yet not directly comparable with those from the corresponding dynamic Poisson models, because derived from smaller samples (much smaller in the case of the sectoral estimates).

For both aggregate and sectoral imports (Table 10), the estimated dynamic effects are substantially lower, demonstrating that the effect of history on imports is not such a powerful ingredient in the trade relations between Kosovo and the EU as it is for exports. In the case of imports, the coefficients on the initial conditions are statistically significant at the one per cent level, with magnitudes of 0.21 and 6.60 for aggregate and sector imports, respectively (compared with 2.29 and 13.80 in the case of exports). The coefficient of the lagged value for aggregate imports, 0.025, is not statistically different from zero, while lagged sector imports exhibits a statistically significant coefficient of 0.35 (compared to 0.23 and 0.75 in the case of exports).

This is new information regarding Kosovo international trade, which compounds the previous impression of lack of dynamism of Kosovo exports. The current pattern of Kosova's exports is not only influenced by the recent past, but even more so by patterns already established in 2005. This suggests a lack of supply flexibility; i.e. possibly deficient capability of Kosovo firms to enter new markets. In contrast, the current pattern of Kosovo's imports reveals considerably less dependence on past patterns and correspondingly great flexibility on the demand side; i.e. an ability of EU exporters to

enter Kosovo market. How can this be explained for Kosovo? Let us look at the data on trade flows of Kosovo while still part of Yugoslavia with the countries of the Western hemisphere, and also reflect on some of the explanations that the literature provides.[13]

Looking back at the official trade data for Kosovo, what we see from the early 1970s until the late 1980s in terms of the structure of trade and trade partners, largely prefigures the current situation in international trade (see Table 6). We still export more or less the same commodities, and we trade with pretty much the same partners. Throughout the 1970s and 1980s Kosovo's exports were dominated by metals, such as bauxite, lead, zinc, chromium, magnesium, nickel, etc., constituting almost 50 per cent of total exports in the early 1970s, albeit falling thereinafter constantly until the late 1980s. Other exported products are generally low-skill semi-processed goods, such as textiles and food products. From the early 1980s, with advances in the economy, more capital-intensive goods dominated the structure of exports, such as machinery and equipment.

Table 6. Structure of Kosovo exports, 1976 – 1986, in %

	1976-78	1979-81	1982-84	1985-86
Metals	45.79	30.34	23.62	23.85
Production of machinery and equip.	9.92	14.52	33.36	36.82
Textile products	25.46	21.07	15.52	12.18
Energy	0	0.32	2.11	6.81
Food products, bev., and tobacco	5.09	5.89	3.38	1.25
Other	13.75	27.87	22.01	19.09

Source: Vjetari Statistikor i KSA të Kosovës (1976 - 1988)

With regards to the major exporting markets, as in the present times, exports from the early 1970s were concentrated in the two major trading blocks, namely countries in the region (or countries within the Russian influence) and the OECD countries.[14] As in the post-war Kosovo, Germany and Italy were the major destinations for Kosovo products. Together, on average, these two countries absorbed over 15 per cent of total Kosovo exports from 1972 until 1986. Nowadays, the EU countries, as discussed above, absorb around 50 per cent of Kosovo's exports. The shift can be attributed to the changes occurring as a result of the transition from the command to the market economy. With the onset of transition, and

[13] There are no data on international trade flows from and in Kosovo during the early transition years, that is, during the 1990s.

[14] Note that the data do not include trade with other Yugoslav entities, as it was considered internal trade.

the widespread liberalisation of the market, Kosovo's exports oriented towards the established trading partners, that is, the EU and neighbouring countries.

Table 7. Main export markets, 1972 – 1986, in %

	1972-74	1975-77	1978-80	1981-83	1984-86
OECD countries					
Germany[a]	16.60	8.20	11.13	8.51	9.67
Italy	4.03	5.19	6.23	4.39	4.07
USA	10.01	14.15	10.48	4.07	1.55
Socialist countries					
USSR	24.57	43.57	36.94	47.24	39.59
Czechoslovakia	18.40	8.35	7.49	17.17	13.21
Albania	0.80	0.55	2.15	1.68	0.90
Bulgaria	4.71	0.58	1.70	1.35	0.49
Rumania	4.41	4.11	2.52	2.32	5.38
Other countries	16.47	15.29	21.37	13.27	25.14

Source: Vjetari Statistikor i KSA të Kosovës (1976 - 1988)

[a)] Germany includes the west Federal Republic of Germany, and the east Democratic Republic of Germany.

What does explain these persisting trade patterns? As we pointed out earlier, Eichengreen and Irwin (1998) emphasise historical accidents such as war, depression, temporary tariff changes, real exchange rate shock, etc. as responsible for persisting trade patterns. No such accounts can be encountered in the trade between Kosovo and the EU. Based on the structure of trade before the breakup of Yugoslavia and afterwards, it is easily identifiable that there are forces of comparative advantage at play. Akin to the Heckscher-Ohlin framework, Kosovo has traditionally exported to the EU products in line with its static

Table 8. Determinants of bilateral trade: export data

	Dynamic Poisson model		Dynamic linear model		FE model (pooled OLS)	
Dependent variables	Levels of exports		Log of exports		Log of exports	
Independent variables	Aggregate	Sector	Aggregate	Sector	Aggregate[1)]	Sector
Log of importers GDP (*lnim_gdp*)	0.104	0.408***	0.296**	0.191**	-	0.359
	(0.592)	(0.005)	(0.052)	(0.015)		(0.816)
Log of exporters GDP (*lnex_gdp*)	5.313	5.081	4.287	-0.436	0.732	1.522
	(0.463)	(0.484)	(0.320)	(0.858)	(0.760)	(0.839)
Log of distance (*lndist_km*)	-1.404***	-1.673***	-1.182**	-0.747***	-3.691***	-4.774
	(0.002)	(0.000)	(0.024)	(0.000)	(0.000)	(0.161)
Common currency (*comc*)	-0.189	0.125	-0.037	0.119	-0.017	0.136
	(0.722)	(0.808)	(0.924)	(0.577)	(0.984)	(0.734)
Diaspora community (*rem*)	1.807***	2.182***	0.468	0.331	4.209***	0.378
	(0.000)	(0.000)	(0.402)	(0.120)	(0.001)	(0.301)
Initial condition (trade in 2005)	2.285**	13.799***	-	-	-	-
	(0.025)	(0.000)				
Lagged trade	0.233***	0.747***	0.630***	0.364***	-	-
	(0.001)	(0.000)	(0.000)	(0.000)		
Constant	-24.880	-28.129	-88.242	16.246	17.131	-0.569
	(0.553)	(0.504)	(0.365)	(0.762)	(0.783)	(0.997)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair dummies	Yes	No	Yes	No	No	No
Country-pair by sector dummies	No	Yes	No	Yes	No	No
Sector dummies	No	No	No	No	No	Yes
Importer country dummies	No	No	No	No	Yes	No
Importer country-sector dummies	No	No	No	No	No	Yes
Number of observations	196	19,012	158	1,222	190	2,290

Note: In parentheses p-values calculated from cluster-robust standard errors (clustered on country-pair), except for dynamic Poisson estimates where errors are Gamma distributed. Levels of significance are indicated as follows: *** p<0.01; ** p<0.05; * p<0.1.

[1)] The EU GDP varies only from year to year (no between-group variation) so is perfectly collinear with the year/period dummies.

Table 9. Determinants of bilateral trade: long-run effects for exports

	Dynamic Poisson model		Dynamic linear model	
Dependent variables	Levels of exports		Log of exports	
Independent variables	Aggregate	Sector	Aggregate	Sector
Log of importers GDP (*lnim_gdp*)	0.136	1.614**	0.802**	0.299**
	(0.590)	(0.037)	(0.024)	(0.020)
Log of exporters GDP (*lnex_gdp*)	6.923	20.093	11.603	-0.685
	(0.463)	(0.500)	(0.410)	(0.858)
Log of distance (*lndist_km*)	-1.831***	-6.616**	-3.177***	-1.174***
	(0.001)	(0.014)	(0.000)	(0.000)
Common currency (*comc*)	-0.247	0.492	-0.101	0.188
	(0.721)	(0.809)	(0.924)	(0.571)
Diaspora community (*rem*)	2.355***	8.631**	1.266	0.520
	(0.000)	(0.028)	(0.261)	(0.117)
Initial condition (trade in 2005)	2.977**	54.572**	-	-
	(0.020)	(0.016)		
Number of observations	196	19,012	158	1,222

Note: See Table 8 notes.

comparative advantage, such as metals and other low-skill labour-intensive goods, and it has imported from the EU high-skill capital-intensive products. Support for this position can be found in the commentary to Eichengreen and Irwin's 1998 paper by Paul Wonnacott (pp. 59-62). He explains:

> Trade is driven not just by the variables in the gravity model and by historical accident, but also by the traditional idea of comparative advantage. While comparative advantage can change, it generally does so only slowly. Thus, for example, temperate countries with fertile prairie lands are quite likely to export wheat to heavily populated countries with poor soil, and this trading pattern is likely to persist. Similarly, one would explain Japanese imports from the Persian Gulf by the large supplies of oil there, and the thirst of Japanese industry for that oil. Likewise, bauxite is shipped from countries that have bauxite mines to those that have plentiful supplies of electric power, most notably cheap hydropower, and both the bauxite supplies and the hydropower are likely to last for an extended period of time.

In addition, Wonnacott makes another very important observation as to why it is important to isolate comparative advantage from other factors as a determinant of persisting trade patterns. According to him, identifying comparative advantage as a

source of persisting trade patterns plays an important role in further integration of the trading partners. He clarifies:

> If, prior to the establishment of a free trade association, countries are close trading partners because of fundamental economic forces – those of classical comparative advantage and geographical proximity – then I would argue that the case for a free trade agreement is strengthened. The countries are natural trading partners, and discrimination against outsiders that any such agreement entails is likely to have relatively weak trade-diverting effects.

This argument is of utmost importance for Kosovo, bearing in mind that it has finalized negotiations on the SAA with the EU.

Likely, comparative advantage is only a part of the story. The other part has to do with the costs associated with entering the new markets, or exiting the existing markets. Once costs are sunk in developing new markets, as Eichengreen and Irwin (1998) explain, the resulting trade pattern generally persists. Extending or shifting to new markets is costly due to cultural, geographic and linguistic differences. Furthermore, establishing distributional networks, training people, gathering information about foreign markets, establishing networks, all incur costs that are irrecoverable. For many companies, including Kosovo exporters short in resources, entering these new and unfamiliar environments is a risky strategy. Kosovo exporters may face high sunk costs under conditions of great uncertainty, under which conditions theory predicts a hysteresis effect, namely that exporters in this position would be inclined towards sticking with existing markets and against entering new ones (on the hysteresis effect, see Dixit, 1989). Moreover, Dutt et al. (2014) argue that trade costs are likely to be affected by the experience of exporting firms. They explain that the experience from repeated interaction in a market is effective in gaining familiarity, thus contributing to dampen the effect of the above mentioned costs related to international transactions. Hence, the effect of trade costs on trade volumes is likely to decline as experience is accumulated over time in a bilateral relationship.

4.2.2 Kosovo Exports and Income Elasticity of Demand and Supply

The results from dynamic Poisson and dynamic linear models on income elasticities and their effect on Kosovo exports likewise make strong suggestions about the character of Kosovo exports and how this contrasts with the character of exports from more

established market economies. Whereas gravity models typically reveal strong income effects on exports, estimates reported in Tables 8 and 9 give rather mixed indications of the income effect on Kosovo exports. Dynamic Poisson estimations show the income elasticity of demand for aggregate Kosovo exports to be, on average, zero for the short-run and long-run coefficients (p=0.59 in both Tables 8 and 9). The resulting statistically insignificant effect is generated only once we control for the effect of Diaspora communities in Kosovo import markets and introduce the initial condition parameter. Based on the aggregate export data, assuming symmetry of effects, Kosovo exports are not affected (i.e. zero effect) as income increases during a boom or falls during a recession in destination countries. In other words, Kosovo exporters do not as yet seem able to benefit from what is generally perceived as the greatest driver of exports, namely the growing income of foreign customers. This implication receives further support from the non-significance of the year dummies (not only individually, but also jointly, p=0.466). The year dummies capture systematic effects occurring in particular years otherwise not captured by the model, which were dominated by the global financial crisis and by its particular manifestations in the EU. The non-significance of the year dummies indicates that these tumultuous events had little impact on Kosovo exports.[15]

In addition, for the dynamic Poisson model estimating the determinants of aggregate Kosovo exports the likelihood ratio test of the null that the country-pair fixed effect or variance component in the composed error term is zero – or, at least 'close enough to zero to be, in effect, zero for purposes of significance' (Stata 12.1 reference, "help *j_chibar*") - cannot be rejected (p=1.00). The economic suggestion of this statistical result is that the "trade potential" effects modelled – at least in part – by these country-pair effects (Baldwin and Taglioni, 2007) also play no significant role in driving aggregate Kosovo exports. This finding was confirmed by estimating the model as a pooled Poisson model (i.e. taking no account of potential country-pair effects) and finding near identical results.

However, dynamic Poisson estimates on sector export data as well as the dynamic linear estimates are somewhat different, that is, the income elasticity of demand for Kosovo exports is, on average, different from zero, albeit still rather low. In the sectoral estimates, the coefficient on the log of importer's GDP is 0.41; meaning that for a one per cent change in the importer's GDP, all else equal, the resulting change in the sector exports is only 0.41 per cent (of course, the long-run elasticity is much higher: 1.61). For

[15] These results can be obtained on request from the authors.

the dynamic linear estimates, a one per cent change in the importer's GDP will on average result in 0.3 and 0.2 per cent increases in Kosovo's aggregate and sector exports respectively. However, the year dummies are statistically insignificant throughout, apart from dynamic linear estimates for aggregate export data. In the latter case, only the dummy for 2009 is statistically significant at the 10 per cent level (p=0.078), presumably capturing the effect of the dip in import demand resulting from the effects of the financial crisis relative to the pre-crisis years.

In the export data, perhaps the most startling result is the statistically insignificant coefficient on the income elasticity of supply (i.e. Kosovo's – the exporter's – GDP). The result is consistent throughout the econometric specifications, including the fixed effect models (for dynamic estimates the *p value* ranges from 0.320 to 0.858). This robust result suggests that economic development in Kosovo is not giving rise to supply capacity yielding increasing exports. In other words, the evidence shows that economic development in Kosovo is not of the kind that develops exporting firms and industries. This seems to suggest that the key to enhancing Kosovo exports is to reform the supply side of the economy. Arguably, the drivers of growth in the recent years in Kosovo, primarily the public capital spending (such as, major infrastructure projects), did not do much to build the export capacities of Kosovo. This calls for a more targeted approach to increasing export capacities in Kosovo. The measures should follow an integrated approach to increasing the capacities of the private sector in Kosovo, including policies/measures that enhance internal capabilities of firms (primarily productivity increases) accompanied by policies/measures targeting the overall business environment.

4.2.3 Kosovo Imports and Income Elasticity of Demand and Supply

On the import side, the results are as expected, and in tune with the predictions of the gravity model. Dynamic Poisson estimates for Kosovo suggest large income effects on imports (Table 10, Columns 2 and 3), although the destination country income effect is statistically significant only when estimated from the sectoral data and then only at the 10 per cent level. However, the dynamic linear estimates from both aggregate and sectoral import data are also large and statistically significant (Table 10, Columns 4 and 5) as is the static fixed effect estimate from the sectoral data (Table 10, Column 7). The import elasticity of demand estimated by the dynamic Poisson model for sector data is 3.85 (Table 10, Column 3). Of course, the long-run elasticity is even higher taking the

value of 5.93 (Table 11, Column 3). In other words, on average a one per cent growth in the Kosovo GDP, keeping all else constant, will increase imports by nearly four per cent in the short run and by nearly six per cent in the long run. These estimated income elasticities suggest an immense hunger for imports in Kosovo, with increases in demand greatly exceeding increases in income.

Table 10. Determinants of bilateral trade: import data[2)]

	Dynamic Poisson model		Dynamic linear model		FE model (pooled OLS)	
Dependent variables	Levels of imports		Log of imports		Log of imports	
Independent variables	Aggregate	Sector	Aggregate	Sector	Aggregate	Sector
Log of importers GDP (*lnim_gdp*)	3.251	3.848*	2.681**	1.278*	-[1)]	4.411***
	(0.165)	(0.097)	(0.048)	(0.087)		(0.006)
Log of exporters GDP (*lnex_gdp*)	0.520***	0.488***	0.647***	0.189**	-0.377	-0.017**
	(0.000)	(0.000)	(0.000)	(0.024)	(0.581)	(0.039)
Log of distance (*lndist_km*)	-1.581***	-1.317***	-1.563***	-0.631**	1.843	-6.122***
	(0.000)	(0.000)	(0.000)	(0.037)	(0.282)	(0.000)
Common currency (*comc*)	-0.441*	-0.416***	-0.125	-0.055	-0.097	-0.371***
	(0.069)	(0.008)	(0.542)	(0.451)	(0.647)	(0.001)
Initial condition (trade in 2005)	0.212***	6.602***	-	-	-	-
	(0.001)	(0.000)				
Lagged trade	0.025	0.351***	0.416**	0.621***	-	-
	(0.116)	(0.000)	(0.013)	(0.000)		
Constant	-12.559	-22.013	-54.854	-24.337	15.911	-43.502
	(0.357)	(0.098)	(0.065)	(0.126)	(0.026)	(0.209)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair dummies	Yes	No	Yes	No	No	No
Country-pair by sector dummies	No	Yes	No	Yes	Yes	Yes
Sector dummies	No	No	No	No	No	Yes
Exporter country dummies	No	No	No	No	Yes	No
Exporter country-sector dummies	No	No	No	No	No	Yes
Number of observations	196	19,007	189	8,297	216	10,806

Note: In parentheses p-values calculated from cluster-robust standard errors (clustered on country-pair), except for dynamic Poisson estimates where errors are Gamma distributed. Levels of significance are indicated as follows: *** p<0.01; ** p<0.05; * p<0.1.

[1)] The Kosovo GDP varies only from year to year (no between-group variation) so is perfectly collinear with the year/period dummies.

[2)] The variable for Diaspora community has not been included in the import models as they distort the estimated results.

Table 11. Determinants of bilateral trade: long-run effects for imports

	Dynamic Poisson model		Dynamic linear model	
Dependent variables	Levels of imports		Log of imports	
Independent variables	Aggregate	Sector	Aggregate	Sector
Log of importers GDP (*lnim_gdp*)	3.333	5.926*	4.591*	3.361
	(0.165)	(0.106)	(0.077)	(0.111)
Log of exporters GDP (*lnex_gdp*)	0.534***	0.751***	1.107***	0.496***
	(0.000)	(0.000)	(0.000)	(0.000)
Log of distance (*lndist_km*)	-1.622***	-2.028***	-2.676***	-1.656***
	(0.000)	(0.000)	(0.000)	(0.000)
Common currency (*comc*)	-0.451*	-0.640**	-0.214	-0.144
	(0.067)	(0.011)	(0.548)	(0.440)
Initial condition (trade in 2005: T0)	0.217***	10.169***	-	-
	(0.001)	(0.000)		
Number of observations	196	19,007	189	8,297

Note: See Table 10 notes.

The exporters' GDP, respectively the EU GDP, produces statistically significant but strikingly small estimated elasticities. The income elasticity of supply from EU countries to Kosovo in the dynamic Poisson estimates is 0.52 for aggregate imports and 0.49 for sector imports. For dynamic linear models, a one per cent increase in the EU GDP would produce an increase of exports to Kosovo of 0.65 per cent in aggregate imports, and of 0.12 per cent in sector imports. The static fixed effects model even suggests a very small negative elasticity. As might be expected, variations in the national income of EU countries do not much affect their exports to Kosovo.

The estimated income effects suggest that the economic development platform in Kosovo has so far induced considerable dynamism in importing but not yet in exporting. This is not unexpected, bearing in mind the stage of development in which Kosovo currently finds itself. Kosovo is still heavily dependent on imports. Although there are concerns regarding the high and persisting negative trade balance, and how the latter will affect the sustainability and the long-run growth prospects of Kosovo, one should be aware that importing, at least in the short run to medium run, is important to Kosovo's economic growth, both in terms of increased consumption and as a channel of technology and knowledge transfer. Regarding the former, an increase in the real income

in Kosovo will likely induce an increase in the imports for consumption goods. On the other hand, imports are probably the only channel for Kosovo to access foreign technologies and knowledge. Adoption of new technologies will trigger labour productivity over time and thus stimulate economic growth in Kosovo. In this context, imports have been instrumental with respect to increasing competitiveness in Kosovo. A recent micro level investigation on the export behaviour of firms in transition countries (which covers Kosovo as well) identifies a positive association between import intensity and both the propensity and intensity of exporting (see Gashi et al., 2014).

4.2.4 Distance and the Trade Costs

Distance has the strong negative impact typically estimated by gravity models of trade. In this respect, at least, Kosovo trade is subject to the same negative influences of transactions costs and/or 'psychic' (cultural, historic, etc.) differences that typically hinder trade amongst nations of all types. In dynamic estimates for both exports and imports, the coefficients are almost uniformly significant at the one per cent level, and have a magnitude typically ranging between 0.75 and 1.70. For illustration, the dynamic Poisson estimate for aggregate export data indicates that a one per cent increase in the distance between capital cities, *ceteris paribus*, reduces the value of exports by 1.40 per cent; for sector exports, the estimated elasticity is 1.67 (Table 8, Columns 2 and 3). In the case of aggregate imports, the corresponding constant elasticities of imports with respect to distance are 1.58 when estimated on aggregate data and 1.32 from sector data (Table 10, Columns 2 and 3).

The size of distance coefficients falls roughly within the range that has been found in other studies, at least within the lower limit of the range. De Benedictis and Taglioni (2011, p. 75) report that the estimates of the constant elasticity of trade to distance range between -0.75 and -1.2. What might explain even higher levels of trade costs between Kosovo and the EU? First, one should bear in mind that we are estimating trade costs between two rather "distant neighbours" (in that Kosovo and the EU do not share a common border) and, as such, distance effects are bound to be larger. Secondly, the distance factor in our case may capture other effects that are usually controlled for through other variables in the gravity model - such as common border, common language, etc. - that play no role in the present study but, in effect, may reflect specific cost dimensions. In this context, even a part of the effect of the common currency variable may have been captured by the

distance variable, potentially distorting the results on the former (see below for discussion on the negative sign of the common currency coefficient).

Nonetheless, these unusually large estimated negative distance effects are most likely detecting that actual costs in the export and import transactions between Kosovo and the EU member states are unusually large. There are various sources that increase the level of costs: some policy-related and others geographical and institutional. *First*, in the context of policy barriers, although the EU has almost removed all tariff rates for Kosovo exports, it still imposes non-tariff barriers in the form of technical requirements (product quality, conformity, compliance, etc.). Kosovo on the other hand still imposes 10 per cent tariff rates on a significant number of products imported from the EU. Both trading partners impose cumbersome licensing, permit, and certification procedures on the respective businesses, and other related requirements. *Second*, although we argue that there have been significant improvements in the transport infrastructure in Kosovo, obviously much more is needed to advance the road and rail infrastructure and to connect to the main regional transport corridors. In this context, the fact that Kosovo has no access to the sea raises the level of trade costs on both sides. *Third*, delays in inspections of goods are common, especially for Kosovo goods destined to the EU market. Delays are also related to the inefficiencies of Kosovo border agencies. Moreover, taking into account the record of Western Balkans countries, businesses that transit goods through these countries will have to deal with corrupt or rent-seeking practices, burdensome regulation, and other related inefficiencies (especially goods transiting Serbia). *En route* delays, and even more importantly a low degree of reliability and predictability of services (that is, unreliable service delivery) increase total logistics costs. *Finally*, low value-to-weight goods affect the costs of exporting for Kosovo producers/exporters.

4.2.5 Common Currency

Common currency effects are uniformly statistically insignificant for all models estimated on export data. However, for imports, the dynamic Poisson estimates unexpectedly indicate that the common currency is negatively associated with the flow of imports to Kosovo. The reason for this is that among the four countries with which Kosovo has never shared a common currency during the sample period is Croatia, and among the seven which adopted the euro part way through, is Slovenia. Trade with these countries was once internal trade within the former Yugoslavia. Reflecting the influence of history,

trade with these countries – particularly imports – is greater than would otherwise be anticipated, thereby reversing the generally negative effect of not trading in a common currency identified in some other studies. We tested this hypothesis by estimating our import models after filtering out the observations for Croatia and Slovenia. In all cases, the estimated common currency effect was changed from negative and significant to positive but insignificant: for aggregate trade flows from -0.44 (p=0.07) to 0.04 (p=0.90); and for sectorial trade flows from -0.42 (p=0.01) to 0.13 (p=0.57). In comparison, none of the estimated effects of the other variables of interest were substantially changed. A similar exercise for exports revealed changes in the estimated coefficients in the hypothesised manner but with continued non-significance. Together, our estimated common currency effects are uniformly statistically insignificant, which is consistent with recent meta-regression evidence (Havranek, 2010).

4.2.6 Diaspora Community

Finally, the large, positive and highly significant influence of Diaspora communities on Kosovo aggregate and sector exports (p=0.000 in both cases) suggests the importance of personal and community networks established in the past.[16] The size of the coefficients is high, indicating the importance of the Diaspora community in exporting to the EU countries where the Kosovo Diaspora is large relative to the EU countries where the Kosovo Diaspora is small in numbers. At the one per cent significance level, a discrete change from 0 to 1 in the dummy variable comparing countries with little or no Diaspora community (dummy=0) to countries with a large Diaspora community (dummy=1) is associated with increased trade by factors of a little over five or almost eight depending on whether the estimate is obtained from aggregate or sector export data (Table 8, Columns 2 and 3).[17]

These Diaspora effects are very large. Yet two considerations suggest that they highlight important features of Kosovo trade. First, the evidence in this study overwhelmingly suggests that Kosovo exports are not responding to traditional trade determinants in the manner of established market economies. Conversely, this Diaspora effect suggests that

[16] This variable plays no role in the import models, both having no strong theoretical justification and, when included, proving uniformly statistically insignificant at conventional levels.

[17] As previously noted, dummy variables in Poisson regressions with a dependent variable specified in levels are to be interpreted in the same way as in OLS regressions with a dependent variable specified in logarithms; in both cases, if the estimated dummy is denoted DV, the formula for the per cent effect on the dependent variable is [exp(DV)-1]*100.

Kosovo exports are responding strongly to other, less usual factors. Secondly, our preferred approach to estimation – the dynamic Poisson model – permits a huge increase in sample size compared to conventional approaches to estimating gravity trade models. In turn, the zeros recovered by Poisson estimation are all or mainly from countries for which the Diaspora dummy is zero: in Kosovo's aggregate export data, all of the 34 zero flows are to countries that do not have a substantial Diaspora community (i.e. dummy=0); and in Kosovo's sectoral export data, 15,150 of the zero flows are to countries that do not have a substantial Diaspora community, while only 4,288 are to countries that do have a substantial Diaspora community. This recovery of zero trade flows allows the major effect of Diaspora communities to emerge in sharp focus.

There are two caveats. The first and more minor is that while the supplementary dynamic linear estimates and the static fixed effects estimates are all positive, only one from three of these estimates is statistically significant. The second and more important is that the dummy variable modelling the diaspora effect is time invariant, which renders the diaspora effect estimated by our preferred dynamic Poisson model subject to the limitations already noted in the context of the estimated common currency effects. However, this caveat is attenuated by the evidence presented above that the "trade potential" effects modelled by these country-pair effects play no significant role in driving aggregate Kosovo exports (see Section 4.2.2 above), in which case it becomes more likely that in the case of aggregate exports we have succeeded in identifying the diaspora effect (to the extent that we can ignore its partial correlation with non-significant – i.e. in effect zero - random effects). Moreover, the diaspora effect estimated from the aggregate export data (1.81) is similar to the diaspora effect estimated from the sectoral export data (2.18) which, by extension, implies no major bias in the latter. Finally, these substantial and highly significant Diaspora effects do accord with strong theoretical presumptions.

The effect of the Diaspora and its associated remittances in Kosovo has been extensively studied from the perspective of the impact on poverty reduction, consumption and investment (see Riinvest, 2007). However, the relationship between the Diaspora community and exporting activities in Kosovo has not been extensively investigated by econometric analysis of trade data. Because the costs of trading goods between Kosovo and the EU are so high (see the discussion on the distance and trade costs), it is understandable that Kosovo businesses will attempt to utilize their business compatriots in the Diaspora to obtain the necessary information regarding the market, legal and

regulatory burden, contract enforcement, and even utilize their distribution channels (retail and wholesale). In addition, Diaspora communities would be able to close the cultural and language gap, so important in international trade transactions.

5. CONCLUSIONS

Kosovo is in the process of advancing further its trade relations with the EU. It has negotiated the SAA, including the creation of a free trade area, which will succeed the less favourable Autonomous Trade Measures, a trade arrangement between Kosovo and the EU that has lasted for almost a decade and a half. This study acknowledged the all-encompassing effects of the forthcoming trade liberalization with the EU. However, it goes beyond the new trade arrangement; we investigate the determinants of the trade relations between Kosovo and the EU, hypothesising that the impediments to a greater flow of goods on both sides are not solely related to the free movement of goods, as the trade between these two partners was already almost fully liberalised.

Based on an 8-year panel of trade and other data, this study investigated the impact of various factors affecting trade between Kosovo and the EU. It concentrated on the impact of "twin forces", i.e. economic masses and trade costs, on the flow of goods between Kosovo and the EU. The study utilized the so-called Gravity Model approach, which, for over fifty years has been a "work horse" in analysing the factors and policies determining trade flows between countries. We argue that no currently available specification of the gravity model is capable both of including all the features suggested by recent advances in theory and of being estimated by currently available econometric methods. For our particular task, which is to increase understanding of Kosovo's trade with the EU and of the corresponding policy implications, our particular compromise is to estimate a dynamic model that controls for country-pair effects. We argue that this approach takes account of the dynamics typically omitted from gravity models, thereby taking into account the particular history of Kosovo's trade with the EU countries, while at least partly addressing the aspects of trade "resistance" highlighted by recent theory. We judged alternative approaches to be unsatisfactory: in particular, specifying our gravity model to include the huge number of time-varying dummy variables suggested by theory means that dynamic models cannot be estimated; while estimation by the usual static models not only entails dynamic misspecification (by construction) but also the

omission of zero trade flows and correspondingly flawed results. Accordingly, we employ a range of econometric techniques to estimate our gravity models, notably a dynamic Poisson panel model, which is our preferred approach.

The results generally confirm what was expected, for both exports and imports respectively. To summarize, the results for exports indicate the following.

- History matters! The models show positive and highly statistically significant coefficients on initial trade conditions and/or lagged trade. The size of both coefficients is rather high, whether we estimate using dynamic linear models or dynamic Poisson regression. The economic meaning of these estimates is that the current pattern of Kosova's exports is not only influenced by the recent past, but even more so by patterns already established in 2005. This suggests a lack of supply flexibility; i.e. possibly deficient capability of Kosovo firms to enter new markets.
- The model gives mixed indications for the income effects on Kosovo exports.
    - The dynamic Poisson model shows the income elasticity of demand for aggregate Kosovo exports to be, on average, zero. Although dynamic Poisson estimates on sector export data as well as the dynamic linear estimates yield income elasticities of demand for Kosovo exports that are, on average, different from zero, these estimated effects are still rather low. Low or zero estimated income elasticities of demand suggest that Kosovo exports commodity types for which demand responds little or not at all to rising income. Even more striking is that statistically insignificant supply elasticities suggest that increases in Kosovo's national income are not generating corresponding export capacity.
- "Distance is alive and well" as an influence on Kosovo exports to the EU countries. The estimated coefficients are almost uniformly significant at the one per cent level and have large magnitudes.
- The Diaspora effects on Kosovo exports are very large. The size of the estimated coefficients indicates the importance of the Diaspora community in exporting to the EU countries where the Kosovo Diaspora is large relative to the EU countries where the Kosovo Diaspora is small in numbers.

On the import side, the following are the major tendencies.

- Once again, history matters! The models yields positive and highly statistically significant coefficients on initial trade conditions and/or lagged trade. These results are consistent throughout models and samples. However, in contrast to the much larger persistence effects noted for exports, the current pattern of Kosovo's imports reveals considerably less dependence on past patterns and correspondingly greater flexibility on the demand side; i.e. an ability of EU exporters to enter the Kosovo market.
- In terms of income effects, the results are qualitatively in tune with the predictions of the gravity model yet quantitatively different from most estimated gravity models. Overwhelmingly, the income effect on Kosovo's demand for imports is estimated to be very large and highly statistically significant. These estimates reveal that Kosovo has a great hunger for imports; in our preferred dynamic Poisson estimates, increases in imports exceed increases in income by a factor of between three and four. In contrast, exports to Kosovo are not particularly responsive to changes in the income of EU exporters (the estimated elasticities are all statistically significant but lower the one).
- Even for imports, distance matters! The estimated coefficients are almost uniformly significant at the one per cent level and have large magnitudes, albeit, lower than in the case of exports.

The summary of results for both imports and exports suggests that Kosovo trade is not responding fully to traditional trade determinants in the manner of established market economies. In other words, the character of Kosovo trade with the EU contrasts with the character of international trade between more established market economies. Evidence for this is the contrast between the relatively high persistence of historical patterns of exports and the relatively low persistence of historical patterns of imports, which suggests an economy much more dynamic on the demand side than on the supply side. Further evidence for this interpretation is the contrasting statistical relationships between imports and exports on the one hand and changing incomes on the other. Estimated income elasticities suggest an immense hunger for imports in Kosovo, with increases in demand greatly exceeding increases in income. Conversely, Kosovo exporters do not as yet seem able to benefit from what is generally perceived as the greatest driver of exports, namely the growing income of foreign customers. Particularly when it comes to exporting, the econometric investigation indicates that the approach to economic development in Kosovo is not of the kind that stimulates exporting firms

and industries. In addition, unusually large estimated negative distance effects are most likely detecting that actual export and import transactions costs between Kosovo and the EU member states are unusually large. As explained, between Kosovo and the EU, trade costs are policy-related, physical and institutional. Finally, the Diaspora effect suggests that Kosovo exports are responding strongly to other, less usual factors. The latter outcome highlights the importance of personal and community networks, which help to reduce high transaction costs in the trade between Kosovo and the EU countries.

The results obtained in this study feed into the current discussion regarding the approach taken, on the one hand, to economic growth and, on the other hand, to trade liberalization and its impact on the economy of Kosovo, specifically on increasing the competitiveness of the private sector. In particular, this study will contribute to discussion regarding the prospective free trade agreements with other countries and Kosovo's WTO accession. On the research side, the gravity model will be used as a tool for policy makers in future to estimate ex-post the impact of different trade-related policies on trade flows.

6. POLICY RECOMMENDATIONS

From a policy perspective, the major recommendation of the current study is that policy makers should look for solutions in Kosovo's own backyard if they want to trigger exporting activities. They should try to take the necessary policy and institutional steps to boost the supply capacities of the country and the overall competitiveness of the economy. This will require measures primarily aimed at removing obstacles to private sector investments, the main engine of growth in market economies. The "growth diagnostics" framework, developed by Hausmann et al. (2008), can be used to pin down the factors that hamper private sector-led export development in Kosovo, and, in turn, economic growth and welfare. The "growth diagnostic" framework is 'a strategy for figuring out the policy priorities', as its architects argue (p.325). According to this approach, in an underperforming economy, requiring deep reforms, almost by definition market imperfections and government distortions are widespread, creating a high-risk business environment detrimental to business investments and entrepreneurial activities.

An important ingredient of the "growth diagnostic" framework is identifying the "binding constraints", since, as the authors argue, in a plethora of constraints that developing countries face, including Kosovo, it is of paramount importance to identify the "binding

constraints" on economic activity, and design a set of policies that, 'once targeted on these constraints at any point in time, is likely to provide the biggest bang for the reform buck' (p.325). Similarly, regarding a country's international competitiveness, a recent publication by International Trade Centre (ITC) argues (2011, pp. 5-6) that:

> The list of constraints that prevent a country from expanding trade is very long. Most developing countries are unable to make wholesale reform changes simultaneously. First, this is due to a failure to create the necessary constituency for reform. Because policymaking requires buy-in from a diverse range of stakeholders with competing views, they need to be convinced of the rationale for reform. Second, many countries are constrained by a lack of financial resources to carry out often-expensive reforms. As a result, it is critical to galvanize stakeholders around overarching constraints, which if addressed would have the greatest impact on expanding trade and promoting economic growth. Because country situations are so diverse, there is no singular trade policy framework that can be advocated globally.

What impedes private sector investments and entrepreneurship in Kosovo, and by the same token, the competitiveness of Kosovo economy? The answer seems to lie primarily in the underperforming institutions in Kosovo. The EU *Progress Report* (2013) shows that the constraints related to the inadequate institutional environment in Kosovo take the form of market distortions, poor governance and a high level of corruption, excessive red tape (permits, licences, and certificates) poor definition of property rights, poor law enforcement mechanisms, financial and fiscal instability, poor delivery of infrastructure services (blackouts are still frequent), inadequate infrastructure (virtual inexistent rail network), lack of skilled and cost competitive human resources, and so on. Hence, improvement of the quality of institutions would most likely produce the largest positive direct effect on private sector investments and, as a corollary, on Kosovo's competitiveness, growth and welfare.

6.1 Principles of competitiveness-enhancing policies

Enhancing competitiveness in Kosovo requires a set of policies based on specific principles. We follow a set of principles designed by Ketels (2010):

- Policies to trigger Kosovo's competitiveness should be broadly based, recognizing the need to upgrade performance across the entire economy, not just the

export-oriented sectors. Policies should ensure an efficient transmission system from the export-oriented sectors to local industries. In this way, the value of the export-oriented sectors, which are in effect the engine of an economy, would generate far-reaching results that would translate into a high standard of living and welfare;

- Competitiveness policies should be oriented towards reaching higher levels of productivity. Policies should concentrate on productivity increases, as the best long-term intermediate target to boost the country's prosperity and welfare;
- The competitiveness-enhancing policies should take into account the Kosovo specific context, targeting current growth and competitiveness-related barriers;
- Competitiveness strategies should combine efforts to upgrade general conditions in the Kosovo economy with efforts that are targeted at the specific conditions affecting individual activities.

The ITC competitiveness framework (2011), based on which a significant number of recommendations are developed here, relies heavily on the outlined principles. Further, the framework suggests a holistic approach to the development of national trade policy reform. This would require, first, identification of the overriding objectives and suitable policy instruments to address constraints on international competitiveness. Next, the policy steps, including changes required in the legislation and regulations, must be implemented in the right sequence, and combine together in synergy, to create a mutually reinforcing policy and institutional framework. Furthermore, all government entities related to trade (i.e. ministries, departments, agencies) must work together to ensure policy coherence. Finally, the national trade policy reform should strike the right balance between various and conflicting interests in the trade sector. To this end, the Government of Kosovo must secure the buy-in of all stakeholders, especially from the private sector.

Next, the detailed policy prescriptions concentrate on the constraints Kosovo businesses face behind the border, at the border, and beyond the border.

6.2 'Behind-the-border' policies

In the context of behind-the-border policies, the Government of Kosovo should direct its attention to the following major areas:

- Creating a stable, predictable, and reliable business environment conducive to private sector investments – domestic and foreign – competitiveness, and overall economic activity. In this context, the efforts should be concentrated on attracting FDI, especially export-enhancing FDI, as the domestic investment potential in Kosovo is limited. Hence, the recommendations aim at promoting export growth by adopting policies conducive to a greater inflow of foreign capital:
  - Political and macroeconomic stability;
  - Low-cost and efficient infrastructure services (see below);
  - Good governance, including reduction of corruption;
  - Better regulatory environment, including reduction of red-tape;
  - Better development of workforce skills and education;
  - Better protection of property rights;
  - Better investment promotion strategies, including incentive schemes.

- Providing competitive and low-cost infrastructure services, such as energy, telecommunication and transport, will greatly increase the country's competitiveness. This would require:
  - Reliable and low-cost supply of energy;
  - Better road and rail network that would link Kosovo with the major regional routes and seaports. Major investments are under way, but the rail network should be a priority in the next term;
  - As CEFTA parties have commenced negotiation on the liberalisation of services in the region, transport services should be one of the priorities of the Government of Kosovo. The Kosovo transport fleet faces major impediments in providing transport services regionally and internationally;
  - Application of the appropriate competition rules in the sectors providing infrastructure services is vital to the efficiency of supply of these services.

- Ensuring product compliance with quality and sanitary and phyto-sanitary standards (SPS). All products, whether agricultural or manufactured, must conform to technical requirements (TBT). Products of animal and plant origin must also conform to sanitary and phyto-sanitary requirements. These market access issues need to be addressed by Kosovo institutions by concentrating on the following:

- Refocus attention of the product quality assurance bodies towards supporting exporting activities. According to UNIDO[18], this can be achieved by:
  - Identifying export sectors and the range of products produced in Kosovo;
  - Identify the markets for which these Kosovo products are destined, and the TBT and SPS requirements that must be met in the destination markets;
  - Determine the trade volumes and calculate the number of laboratory tests and inspections, equipment calibrations and enterprise system certifications needed to meet TBT and SPS requirements.
- Support businesses in complying with SPS and TBT requirements in the markets they seek to penetrate. Standards compliance is costly, especially for small-scale Kosovo business;
- Through the Accreditation Directorate ensure compliance of the conformity assessment bodies (laboratories and inspection bodies) with international best practices and standards;
- Ensure that laboratories and inspection bodies providing conformity services have international accreditation to guarantee global acceptance of the certificates granted;
- Ensure testing accuracy and reliable calibration of testing equipment by increasing the capabilities of the Metrology Directorate in the areas of dimensional, volume, mass, thermometry, pressure and electrical metrology;
- Increase awareness of businesses in the importance of complying with international product standards;
- Increasing institutional capacities of the quality assurance mechanisms in Kosovo to deliver efficient service to the business sector.

[18] Accessed at: http://www.unido.org/fileadmin/user_media/Publications/documents/fast_forward.pdf. Accessed on: December 2014.

6.3 'Border-in' policies

'Border-in' policies refer to effective trade facilitation, which increases competitiveness by allowing exporters to trade goods and services on time and with low transaction costs. The modernisation of logistics services demands moving a set of these services internally. Some of the recent logistics reforms in Kosovo include the inspections of goods at inland terminals, warehousing, information management, risk assessment, etc.

The trade facilitation measures to be undertaken in Kosovo should draw on the outcomes of the recent self-assessment conducted by the Government of Kosovo in relation to compliance with the WTO Trade Facilitation Agreement. However, we argue that the following issues are the most pressing:

- Further streamlining procedures and clearance systems at the border by reducing the documentation required and removing complex practices causing delays in the cross-border movement of goods;
- For a landlocked country such as Kosovo, the competitiveness of the export sector depends also on the efficiency of customs services in neighbouring countries. Hence, notwithstanding other regional countries, Kosovo authorities should work closely with their Albanian counterparts (as Albania is the main gateway for Kosovo producers to reach international markets) on streamlining border inspection procedures, harmonizing procedures and documentation, increasing efficiency of border agencies and port authorities, easing the transit process, conducting joint risk profiling, and so on;
- A greater commitment towards implementing an integrated risk-management system in border clearance and inspections regimes, especially in the Kosovo Food and Veterinary Agency. Kosovo Customs has a risk-based inspection system in place, but more efforts should be devoted to making the system more effective. However, the Kosovo Food and Veterinary Agency still physically inspects 100 per cent of consignments of products of animal and plant origin; gradually the latter should move to risk-based inspections;
- Improve the quality and supply of logistics services, particularly the customs brokers/agents services. Currently, customs agents are a significant bottleneck in the cross-border operations. Typically, the benefits of progress in one or more border agencies may not be realized in full until impediments to border control processes in other links of the chain are also removed; for example, customs

agents. Kosovo Customs should be supported in the process of certification it has recently initiated to reform the customs brokers sector in Kosovo;

- Further strengthen the so-called hard infrastructure of trade facilitation, including the physical infrastructure at the border and the information and communications technology to improve efficiency and productivity as well as to reduce transaction costs.

6.4 'Beyond-the-border' policies

Finally, as discussed, Kosovo has, and it is in the process of liberalizing, almost 80 percent of trade. This entails that Kosovo goods are and will be flowing free of tariff charges to the major export markets, such as the neighbouring countries, the EU and Turkey. However, still impediments to the free flow of goods are widespread, especially in the form of non-tariff measures such as TBT and SPS. Hence, the following requires further attention:

- Negotiate with the CEFTA and EU countries, either bilaterally or multilaterally, reduction of non-tariff barriers on industrial and agricultural goods, especially the SPS and TBT. The most pressing issue are the NTBs imposed by Serbia that take various shapes and forms, impeding even transit from and to Kosovo. If not successful, the Government should consider resorting to the unilateral measures towards specific countries as the costs are too high for Kosovo businesses;
- Negotiate greater access of services to the CEFTA countries. As pointed out in the context of transport services, Kosovo is in the process of negotiating services within CEFTA, and, for this, it is of paramount importance to have a broad-based involvement of stakeholders, comply with WTO rules, assess the impact on the economy, negotiate and agree schedules that deliver the maximum economic benefits to Kosovo;
- As pointed out earlier, the major provisions regarding trade in service have been agreed with the EU within the SAA. However, there is a long way until the full liberalisation of services between the parties is reached. The review of the provisions covering services as foreseen in the SAA should concentrate on removing restrictions on the movement of labour as the latter seems to have a strong negative effect on the potential earnings for Kosovo;

- Move steadily towards WTO membership. Membership has major benefits, but the risks cannot be ignored. The WTO membership of Kosovo should be viewed from the development perspective of the country.

6.5 Industrial policy and competitiveness

As the results of the study show, the gravest concern over the economy of Kosovo is its supply capacity. Hence, in addition to the proposed measures, the Government of Kosovo should rely also on industrial policy mechanisms to boost the supply capacities of the country and its overall competitiveness. Instructive examples are numerous, although, the risks are high. A useful example is comprised of the ten industry studies presented in Chandra (2006) showing that, by supporting and promoting technology development and institutional innovation, government support policies played a critical role in enabling these industries to become competitive both domestically and internationally.

Here, it is beyond the scope of this study to identify the potential industrial policy mechanisms to support the reindustrialization of Kosovo. However, following a vast literature on the subject, a set of guiding principles can be developed (see Rodrik, 2007). One of the major principles concerns the institutional architecture required for successful industrial policy. The main reason why industrial policy has not been favoured in academic circles and policymaking bodies since the early 1980s was that government failures - that is, information asymmetries, corruption, and rent-seeking activities - were seen as causing far more distortions in the economy than market failures. Hence, the recent resurgence of industrial policy as a mechanism to pull developing countries from their persistent economic difficulties gives greater attention to the institutional structures required for successful industrial policy. In this context, the industrial policy should be based on:

- A strong political support and leadership from the top;
- It should ensure strong coordination with all stakeholders, both private and public, respectively; and,
- It should develop strong mechanisms of accountability and transparency.

Apart from the specific institutional design required for successful industrial policy, other ingredients include the types of incentives provided; setting benchmark criteria for success and failure; supporting activities rather than sectors; supporting activities that generate industry and wider spillovers; and so on. One remark that stands out from the recent industrial policy discussions is that 'picking losers' is inevitable (one of the weak links of the policy). However, as Rodrik (2007, p.116) argues: "… the objective should not be to minimize the chance that a mistake will occur … but to minimize the costs of mistakes when they occur. If governments make no mistakes, they are not trying hard enough".

6.6 Productivity and competitiveness – firm-specific measures

Business-friendly environment reduces the overall level of risk and uncertainties in the economy, inducing investments in private firms and increases entrepreneurial activities. In this context, it is of paramount importance to give priority to firm-specific mechanisms that boost firm-level productivity. Hence, in order to achieve higher levels of competitiveness, the following productivity-enhancing mechanisms - amongst others - should be targeted by internationally oriented business in Kosovo:

- Managers are critical in driving productivity differences. Hence, business should employ or create mechanisms to develop talented and skilful managers with an international vision;
- Productivity is related to labour quality, including education, training, overall experience, and tenure at a firm. Hence, businesses should employ highly educated and high-skill labour. In addition, firms have to design and establish the mechanisms of workforce development, including training or on-the-job coaching. The latter is critical for internationally oriented businesses having in mind the overall low skill level of the workforce in Kosovo;
- Capital investment in new and advanced technology, including information technology, should be another priority for business. In addition, firms should concentrate on advancing their so-called 'intangible capital', such as reputation, know-how, and so on;

- Businesses should start gradually investing in research and development activities (R&D). R&D expenditures, and the ensuing innovation, are the major driver of firms' productivity differentials;
- For small-internationally oriented businesses a stronger linkage with their large counterparts and foreign companies should be brokered. Productivity spillovers from large and foreign firms have been proven to increase productivity in other firms.

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ANNEX 1: THE GRAVITY MODEL

A1.1 Literature on the Gravity Model

The study utilizes the so-called Gravity Model approach, which has been the major empirical tool in analysing trade between countries and trade-related policies for over 50 years. On the importance of the gravity model as the most important empirical tool in international trade, De Benedictis and Taglioni (2011, p. 56), summarise:

> … from the first conceptualisation of Tinbergen (1962) the gravity equation has been used time and again to empirically analyse trade between countries. It has been defined as the workhorse of international trade and has been considered as a "fact of life" in this field of research. The gravity equation's ability to correctly approximate bilateral trade flows makes it one of the most stable empirical relationships in economics.

In the same light, Anderson (2010, p. 1) further argues:

> Gravity has long been one of the most successful empirical models in economics, ordering remarkably well the enormous observed variation in economic interaction across space in both trade and factor movements.

The gravity model, as the name suggests, derives from Newton's law of gravitation: just as planets are mutually attracted in proportion to their sizes and proximity, countries trade in proportion to their respective GDPs and proximity (WTO, 2012). In its basic form, the gravity model, as Shepherd (2013) explains, links trade flows (export flows, import flows, or average bilateral trade flows) directly with economic size (usually proxied by GNP, GDP, and in some cases also population) and inversely with trade costs (proxied by geographical distance between the economic centres of countries, i.e. usually capital cities), capturing in this way some deep regularities in the patterns of international trade. In this context, from the theoretical standpoint, as De Benedictis and Taglioni (2011) explain, the gravity equation is in fact an expenditure equation, whereby the importers' GDP enters the equation to capture the standard income effect, that is, the impact of changes in an economy's income on the quantity demanded of goods and services. In addition, all things equal, the distance factor enters the equation as a proxy for bilateral trade costs, which get passed through to consumer prices. Finally, the exporter's GDP, in the traditional view represents the export capacity or supply of the country.

From the early eighties, research on the gravity model refocused on developing theoretical underpinnings for the model. Anderson (2010, p. 1) argues that, for a long time, the gravity model remained distant from mainstream economic theory, virtually "an intellectual orphan, unconnected to the rich family of economic theory". Until then, nearly all developments regarding the gravity model concerned the empirics of the relationship within the gravity equation. And, as stated above, Anderson (2010) further argues that the empirical credentials of the gravity model were outstanding.

Following Anderson (1979) and subsequent work by Anderson and van Wincoop (2003), Baldwin and Taglioni (2007), and Anderson (2010), a theoretically consistent gravity model has the following ingredients:

$$X_{ij} = \frac{GDP_i \, GDP_j}{GDP_w} \left(\frac{t_{ij}}{\Pi_i \, P_j} \right)^{1-\sigma}$$

Where:

X_{ij} – exports from country i to j;
GDP_w – World GDP;
GDP_i and GDP_j – GDPs of countries i and j;
t_{ij} – cost in j of importing a good from i;
σ – the elasticity of substitution;
Π_i and P_j – country i's outward and country j's inward multilateral resistance terms.

In the equation, the elasticity of substitution factor is greater than one ($\sigma > 1$). The trade cost factor, $t_{ij} \geq 1$, is defined as the gross bilateral cost of importing a good (one plus the tariff equivalent). In other words, if p in the country of origin (i.e. country i) is the supply price of a good, $p_{ij} = t_{ij}p_i$ is the price faced by consumers in the country of destination (i.e. country j). The multilateral resistance variables, or the so-called exporter and importer ease of market access, capture countries' average international trade barriers. As such they capture both obstacles to bilateral trade flows that exist at the bilateral level (bilateral resistance) and the weight of these obstacles relative to those of all other trading countries (known as multilateral resistance). According to Shepherd (2013, p.14) 'this model picks up the fact that changes in trade cost on one bilateral route can affect trade flows on all other routes because of relative price effects'. In other words, outward multilateral resistance (Π_i) captures the possibility that the ease of access for the exports of country A into country B depends not only on bilateral trade costs – hence on bilateral trade promoting/hindering influences - between A and B but also on

relations between both A and B and some third country C (and, by extension, all other countries) so that, for example, a free trade agreement between B and C would affect exports from A to B. Similarly, inward multilateral resistance (P_j) captures the possibility that importing by country B depends not only on bilateral trade costs between A and B but also on relations between both A and B and some third country C (and, by extension, all other countries). The introduction of the inward (P_j) and outward (Π_i) multilateral resistance terms in the gravity equation has been the most significant recent theoretical addition to the gravity model.

Beyond the basic specification, the model has been augmented to account for various geographical, historical, cultural, and institutional factors impacting trade relations between countries. Variables such as sharing a common border, common language, colonial links, common institutions or legal systems, common ethnicity or nationality, similar tastes and technology, common military links, etc. have been regularly included in the gravity model. Yamarik and Ghosh (2005) identify 47 variables used in the gravity model literature. Their sensitivity analysis shows that only 20 variables are robustly linked to trade. The latter include: the level of development; trade policy; common language; colonial ties; geographic factors; relative population density; common currency; and membership in various trade liberalisation mechanisms.

Following these theoretical developments, the gravity equation has been derived for many different trade frameworks, including Ricardo's comparative advantage (Eaton and Kortum, 2002), Heckscher and Ohlin's factor endowment approach (Deardorff, 1998), the monopolistic competition framework (for a discussion see Feenstra et al., 2001) and, more recently, models of international trade with firm heterogeneity (Helpman et al., 2008).

Moreover, the gravity model has been used extensively to determine *ex-ante* and *ex-post* the effects of the trade and other policy mechanisms. Tariffs and non-tariff instruments have been frequent ingredients of empirical gravity models (see Linneman and Verbruggen, 1991, and WTO, 2012). In addition, the effects of a FTA on trade flows have been estimated widely, including the trade creating and trade diverting effects of FTAs (see De Benedictis and Taglioni, 2011, and Shepherd, 2013). Furthermore, Rose (2004) and Helpman et al. (2008) study the impact of WTO accession on trade. Rose (2000) and Frankel and Rose (2002) utilize gravity models to assess the effects of exchange rate volatility and currency unions on trade.

The gravity model has been applied in different sector and country settings. Regarding the former, the gravity equation has been employed to assess trade patterns in manufacturing (Linneman and Verbruggen, 1991) and services (Kandilov and Grennes, 2010; Shepherd, 2013). Regarding the later, trade flows have been assessed at the bilateral and regional level and worldwide. Examples of estimating trade patterns at the bilateral level include McCallum (1995) for US–Canada trade flows. At the regional level, it is worth mentioning the study on the trade patterns within the EU by Fontagné et al. (1997). Finally, a number of recent studies apply the gravity model to datasets covering countries all around the globe (for instance, Helpman et al., 2008, cover 158 countries worldwide).

A1.2 Econometric Issues of the Gravity Model

Advances in the theoretical and empirical gravity model have become more costly with respect to the attention that needs to be paid to theory but, in turn, this brings the benefit of greater certainty with respect to the specification of gravity models and, hence, of how to estimate them. In this context, the dynamics of the relationships in the gravity model should be accounted for (see the previous discussion). Second, since Anderson and Wincoop (2003), a theory-consistent gravity model has to control for both bilateral and multilateral trade resistance. According to their argument, controlling for multilateral trade resistance will produce unbiased estimates of the impact of distance and other bilateral variables on bilateral trade flows. Third, firm heterogeneity implies the need for a strategy to account for zero observations in the trade matrix, which if not taken into consideration will cause a selection problem. And, finally, any remaining issues concerning potential endogeneity in the model should be addressed.

To model the dynamics of bilateral trade flows one has to specify a dynamic panel model, i.e. a model that includes the lagged dependent variable – in this case, lagged trade – among the explanatory variables (for more on dynamic panel models see Wooldridge, 2002; Greene, 2008). The econometric perspective on the importance of modelling dynamics is outlined by Greene (2008, p.469; emphasis added) and is consistent with the economic argument presented by Eichengreen and Irwin (1998):

> Adding dynamics to a model … creates a major change in the interpretation of the equation. Without the lagged variable, the "independent variables" represent the full set of information that produce observed outcome y_{it}. With the lagged variable, we now have in the equation the entire history of the right-hand-side variables, *so that any*

measured influence is conditional on this history; in this case, any impact of (the independent variables) x_{it} represents the effect of *new* information.

Taking into account both the economic argument for introducing the history of trade flows and the econometric means of so doing, dynamic panel models, especially when estimated by generalized method-of-moments estimators, are well suited to estimate a theory-consistent gravity model, whereas cross-section or static panel models cannot be so by definition. However, before concluding with a preference for dynamic modelling, we must consider two other issues highlighted by theory, namely: controlling for multilateral trade resistance factors; and addressing other potential sources of endogeneity.

Baldwin and Taglioni (2007, p.786) show that the Multilateral trade resistance factors (or, as they put it, the gravitational un-constant) can be modelled by dummy variables that captures all the bilateral trade costs between pairs of origin and destination countries ('so it is different for every pair of trade partners, and it will vary over time'). Omitted cross-sectional and/or time-varying multilateral trade influences correlated with variables included in the model – e.g. trade costs proxied by distance - will appear in the regression errors and so give rise to endogeneity and correspondingly biased estimates. Baldwin and Taglioni (2007, p.799) analyse the two most common ways to address this issue, namely: specifying the gravity model either with nation dummies ('a dummy that is one for all trade flows that involves a particular nation'); or with country-pair dummies ('a dummy that is one for all observations of trade between a given pair of nations', which in a panel model 'is just the classic fixed effects estimator, since the panel is made of time series for every pair's trade'). Of course, both cannot be included, because they are collinear. In comparing the relative merits of these two approaches, Baldwin and Taglioni (2007, p.799) conclude that while both remove cross-sectional sources of bias, because neither remove potential time-series correlations between the omitted trade influences and variables included in the model some bias may remain. However, Baldwin and Taglioni (2007, p.802) conclude that 'the pair-dummy does at least as good a job' and is 'superior to national dummies in panel data'. Moreover, Baldwin and Taglioni (2007, pp.793 and 795) refer to two examples in the literature in which controlling for country pairs leads to huge reductions in estimation biases. Other approaches to controlling for multilateral trade resistance factors require even more dummy variables. Baldwin and Taglioni (2007, p.811) consider 'time varying country dummies with pair dummies'; while to address completely multilateral trade resistance, WTO (2012) argues that separate importer and exporter time varying individual effects should be introduced in the model (see also De

Benedictis and Taglioni, 2011, pp. 68 and 74). By extension, in the analysis of panel sector data, country-industry specific time-varying effects should be applied. Yet Baldwin and Taglioni (2007, p.811) explain why a "time-varying pair dummy approach will rarely be useful', and Shepherd (2013, p.38) notes that 'models including a large number of sectors quickly become unmanageable due to the number of parameters involved … and may even prove impossible to estimate with some numerical methods such as Poisson' (on these computational difficulties, see also De Benedictis and Taglioni, 2011, p.74; and Head and Mayer, 2013, pp.21, 23, 26, 48 and 50). In this study, this practical limitation applied not only to our sector models but also to our aggregate models; dynamic models with full sets of time-varying importer and exporter dummies could not be estimated at all, while static models yielded diagnostic failures and correspondingly invalid (indeed, bizarre) results.

Accordingly, in this study, our compromise is to estimate dynamic models that control for country-pair effects - by including them in a composed error term – while addressing the associated problem of the non-exogeneity of the lagged dependent variable. We return to this issue below. In addition, in our model reported below we estimate trade effects conditional on year/period dummies (omitting only the first, so that all period effects are estimated relative to the omitted base period). These control for time-varying multilateral trade resistance effects to the extent that these are similar across the country pairs. Specification with the seven-year dummies also serves the statistical function of minimising the potential for cross-group error correlation arising from common shocks in particular periods (one such common shock would be the termination of Autonomous Trade Measures by the EU in 2011). In our sectorial models we include country, sector and period dummies (Shepherd, 2013, p. 37, argues that, as trade costs vary by sector, so the multilateral resistance terms also vary by sector).

The second issue is the potential endogeneity of regressors. There is a suspicion that usually policy variables included in the model are potentially endogenous. In our model, the only policy variable included is the common currency. In general, one could argue that the adoption of a common currency is conditional on established trade patterns, and is thus potentially endogenous. However, in the case of Kosovo this presumption does not stand. The adoption of the Euro was an outcome of the peace process following the 1999 war. Since, back then, Kosovo had no institutional infrastructure in place to conduct a monetary policy, including managing its own currency, it was decided to introduce the Euro as legal tender. Hence, the adoption of the euro reflects exigencies that are not related in

any way to the established trade patterns between Kosovo and the EU. Similarly, there is not a strong case for treating our remittances variable as endogenous with respect to trade flows. To capture the effect of remittances we include a dummy variable for the eleven EU countries with the largest proportions of the Kosovo Diaspora. In turn, the recent Diaspora is largely conflict driven so there is no presumption that the location of Diaspora communities within the EU is trade driven. Of course, it may be the case that endogeneity arises because both trade patterns and the location of Diaspora communities are both partly determined by some unobserved influences. However, on the assumption that such omitted variables relate to unobserved country-pair influences that do not change over time – or, at least, change little – then such influences are controlled for by specifying panel models with group-specific (fixed) effects. Potentially, controlling for country-specific fixed effects is problematic in the context of a dynamic specification in which the fixed effect is part of the composed error term and thus – by construction – correlated with the lagged dependent variable. However, this problem is addressed in both of the dynamic estimators used in this study: in our dynamic linear model, GMM system estimation uses levels and lagged differences to provide 'internal' instruments for the lagged dependent variable (Roodman 2009); and in our dynamic Poisson model the problem is addressed by estimating conditional on the initial value of trade and on the observed history of the exogenous explanatory variables (Wooldridge, 2005).

According to De Benedictis and Taglioni (2011, p.85): 'Dynamics is largely a missing piece in the gravity model story.' Yet taking dynamics – the history of trade relations – into account involves a trade-off. On the one hand, to take into account fully all the theoretically possible variations in trade resistance factors requires specifying a model with such a huge number of dummy variables that it can be estimated only within a static framework and thus ignores dynamics. On the other hand, dynamic models - taking history into account - cannot contain all the dummies demanded by theory-consistent models (indeed, any attempt to specify a dynamic model in this way results in failure to converge to a solution). We favour dynamic estimation, because our preferred dynamic estimators are able to address dynamic misspecification and at least "partially address" misspecification from omitting variations in trade resistance factors (Baldwin and Taglioni (2007, pp.793 and 795). The alternative is to estimate one or other static models that *may* better address misspecification from omitting variations in trade resistance factors but which are certain to suffer from dynamic misspecification. There are two additional reasons for our choice of dynamic estimation. First, we believe historical influences to be

of particular importance for Kosovo trade patterns (see below). Secondly, a gravity model saturated with fixed effects absorbs every variable of interest. Yet, although potential bias dictates caution in interpreting our results (as with other gravity specifications), comparison among our estimates of GDP and remittance effects may suggest useful stylized facts about Kosovo trade.

Having explained our preference for a dynamic model, we now consider precisely which dynamic model is most appropriate. Accordingly, we turn to the issue of the treatment of zeros in the trade data. The log-linear form of the gravity equation suggested by theory requires transformation of the continuous variables, such as trade, GDPs and distance, into logarithmic form. Yet bilateral trade datasets, including ours, contain many zero values, which cannot be subject to logarithmic transformation, because the log of zero is not defined. This means that if we apply log-linear transformation and apply any of these techniques we omit all zero observations in the dataset. This would not be a problem if choices to not export (i.e. zero trade) were made at random. However, zeros have a specific meaning: in most cases they are a symptom of a self-selection process (as discussed earlier in the context of firm heterogeneity and entry/exit decisions). In other words, zeros indicate that barriers to trade are prohibitive to a particular trade relationship at any given demand and supply. Hence, estimating the model on only positive bilateral trade flows would very likely produce biased results.

For Kosovo this would be a real handicap, as a result of the sporadic/add hoc nature of exports in general. Moreover, from the empirical point of view, the greater the disaggregation of the data the greater the number of zero values in the matrix. Hence, omission of zeros would greatly affect our estimations at the sectorial level. A number of techniques have been proposed in the literature to mitigate the problem of non-random zeros (see De Benedictis and Taglioni, 2011 for a discussion). We follow Wooldridge (2005) in specifying a Dynamic Poisson Model, in which unobserved effects can be included on the assumption that they are Gamma distributed (pp. 50 and 51) and are conditional on the initial value of trade and the exogeneity of the explanatory variables (pp. 40 and 43). It is now well established that Poisson regression is most suitable for estimating gravity models in general. Apart from the ability to estimate with zero observations in the trade matrix, this model accounts for the presence of heteroskedasticity under the assumption of a multiplicative error term (see Shepherd, 2013, pp.51-52). Moreover, this model is suitable for estimating our theory-informed gravity model, because its two key assumptions are: correctly specified dynamics, which

accords with the theoretical case presented by Eichengreen and Irwin (1998) (see also De Benedictis and Taglioni, 2011, pp. 85-86); and exogenous regressors, which with respect to bilateral trade regressed on income and distance (our main control variables) corresponds to the usual assumptions of gravity modelling (while national income does depend on aggregate trade, the extent to which it depends on any particular bilateral flow is not regarded as a substantial cause of potential endogeneity).

For the reasons emphasized above, and particularly given the huge increase in sample size (especially for sector analysis), dynamic Poisson estimation will be our preferred approach. Inclusion of zeroes results in a drastic change in our sample size: for aggregate export and import data the increases are 24 and 3.7 per cent respectively; and the changes in the sample size of the sectorial export and import databases are staggering - respectively, by factors of 15.6 and 2.3. However, both dynamic GMM and static OLS estimates will be presented to check the robustness of our results.

ANNEX 2: INTERPRETATION AND ECONOMETRIC SPECIFICATION OF OUR GRAVITY MODEL

A2.1 Interpretation of results

In the Dynamic Poisson Model there are two issues one should consider before interpreting the results. First, Santos Silva and Tenreyro (2006, p.654) explain that the dependent variable in the Poisson model is specified in 'levels' rather than in logarithms, hence as Shepherd (2013, p.52) notes, the coefficients of independent variables entered in logarithms are interpreted as simple or constant elasticities, while 'the coefficients of independent variables entered in levels are interpreted as semi-elasticities, as under OLS'. In addition, Santos Silva and Tenreyro (2006, p.654) make clear that dummy variables in the Poisson model are to be interpreted in the same manner as in a model estimated by OLS. We also follow Silva and Tenreyro (2011, p. 210) in rescaling continuous variables in the model by dividing through by 10 million, as the dynamic Poisson estimator in STATA (>xtpoisson<) is known to have convergence issues when the database contains very large values. Concerning the log-log specification in the dynamic linear models, where both dependent and independent variables are specified in natural logarithms, coefficients of the independent variables measure the constant elasticity of the dependent variables with respect to independent variables.

The second issue concerns the short-run and long-run relationships between variables. Tables 8 to 11 present estimates for both the short-run (or the so-called impact effect of changes) and the long-run effects of our variables of interest on the export and import flows. An important advantage of the dynamic panel models is the possibility to distinguish between and to measure both short-run and long-run relationships. This distinction is important in the present analysis, because many of the relationships cumulate and thus take effect over time. Although not completely attained in practice, mathematically the long-run effects capture the elasticity asymptotically (i.e. after infinite periods). Economically, the point is that long-run effects may be substantially larger than short-run effects, depending on the size of the persistence effect estimated by the coefficient on the lagged dependent variable.

The standard errors arising from both our dynamic system GMM estimation and our static OLS estimates are adjusted for clustering along country-pair or country-pair-sector lines. However, in the case of our Dynamic Poisson Models, we follow Wooldridge (2005,

p.51) by specifying Gamma heterogeneity and reporting the associated default (OIM) standard errors. It is not possible to compute cluster-robust standard errors for this model even in a static specification, while dynamic specification – i.e. with the lagged dependent variable among the regressors - precludes implementation of the cluster bootstrap in the manner suggested by Cameron and Trivedi (2010, pp.435 and 637).[19] Fortunately, our results yield some evidence that cluster-robust standard errors would not substantially affect inference from our Dynamic Poisson Models. In Section 4.4.2 below, we report that the Dynamic Poisson Model estimated on the aggregate export data does not yield significant group-specific – i.e. country-pair – effects and that, correspondingly, the same coefficients and standard errors are obtained from a Poisson model estimated without country-pair effects. This result is valuable in the present context, because this model can be estimated with both OIM and cluster-robust standard errors. We find that the OIM standard errors were a little larger than the cluster-robust standard errors, although not so much so as to change judgements on the statistical significance or otherwise of any of the effects discussed below. Accordingly, at least for the estimates arising from our aggregate export data, we have evidence that using the default standard errors for inference is a conservative approach; in other words, using the larger of the available standard errors makes it less likely to infer that our variables of interest have statistically significant effects on trade.

To give context to the outcomes of our dynamic estimates, we discuss next the history of Kosovo trade patterns, specifically the structure of trade and the partner countries in the Western hemisphere. Further, we discuss the results on the GDP coefficients, followed by the discussion on trade costs, common currency, and the Diaspora effect on the exports of Kosovo to the EU.

[19] In the "Help" file to **xtabond2**, Roodman (2009a) explains the problem as follows: Stata's bootstrap command 'builds temporary data sets by sampling the real one *with replacement*. And having multiple observations for a given observational unit and time period violates panel structure'. Accordingly, using Stata 13.1 to implement the cluster bootstrap approach to obtaining cluster-robust standard errors for a dynamic model results in the following error message: 'insufficient observations to compute bootstrap standard errors: no results will be saved'.

A2.2 Econometric specification of the model

The diagnostics of the dynamic panel models indicate that these models are well specified, whereas the static fixed effects models are not. The latter are mainly specified with binary variables, and as such specification problems are expected, as the normality assumption is violated. In this context, an additional advantage of the dynamic panel models is that they do not require a normal distribution of the error term (for more see Greene, 2008, pp. 201, 525, and 533). However, the system GMM approach to panel estimation with a lagged dependent variable does assume no second-order serial correlation in the error term of the first-differenced equation, because this would render lagged differences of the dependent variable endogenous and thus invalid as instruments.) In these models, we must test the validity of instruments, which includes: first using the Arellano and Bond test for first- and second-order serial correlation among the residuals (expecting the former but not the latter); and, second, using the Sargan test, or the preferred heteroskedasticity-robust Hansen J-Statistic, to test for the validity of the overidentifying restrictions (instruments) (for details see Roodman, 2009). With regards to the dynamic panel estimations conducted by system GMM, the models are uniformly well specified (these estimates with the accompanying diagnostic tests are available on request).

Post estimation tests for Dynamic Poisson Model are rather scarce. However, Wooldridge (2005) and Silva and Tenreyro (2011) provide some very valuable hints on the correct specification of the model. As we pointed out earlier, Wooldridge (p. 50) makes it clear that the distribution of the random effects in dynamic Poisson is Gamma, and that the dynamic Poisson model is to be estimated 'in software packages that estimate random effects Poisson models with Gamma heterogeneity'.[20] Furthermore, dynamic Poisson is suitable for estimating models in the presence of heteroskedasticity, under the assumption of a multiplicative error term. Moreover, the dynamic Poisson is consistent as a pseudo-maximum likelihood estimator, regardless of how the data are distributed. Accordingly, Silva and Tenreyro (2011) show that the Poisson model performs strongly even in the datasets with a large proportion of zero values.

[20] Because our dynamic Poisson model assumes – following Wooldridge (2005) – gamma distribution of the random effects (i.e. the fixed effects component of the composed error term), it is not estimated by quadrature. For this approach, we would have to assume – contrary to our model specification – that the random effects were subject to a normal distribution. Hence the check provided on many random effects models by Stata's **quadchk** diagnostic is not relevant in this study.

ANNEX 3: DESCRIPTIVE STATISTICS

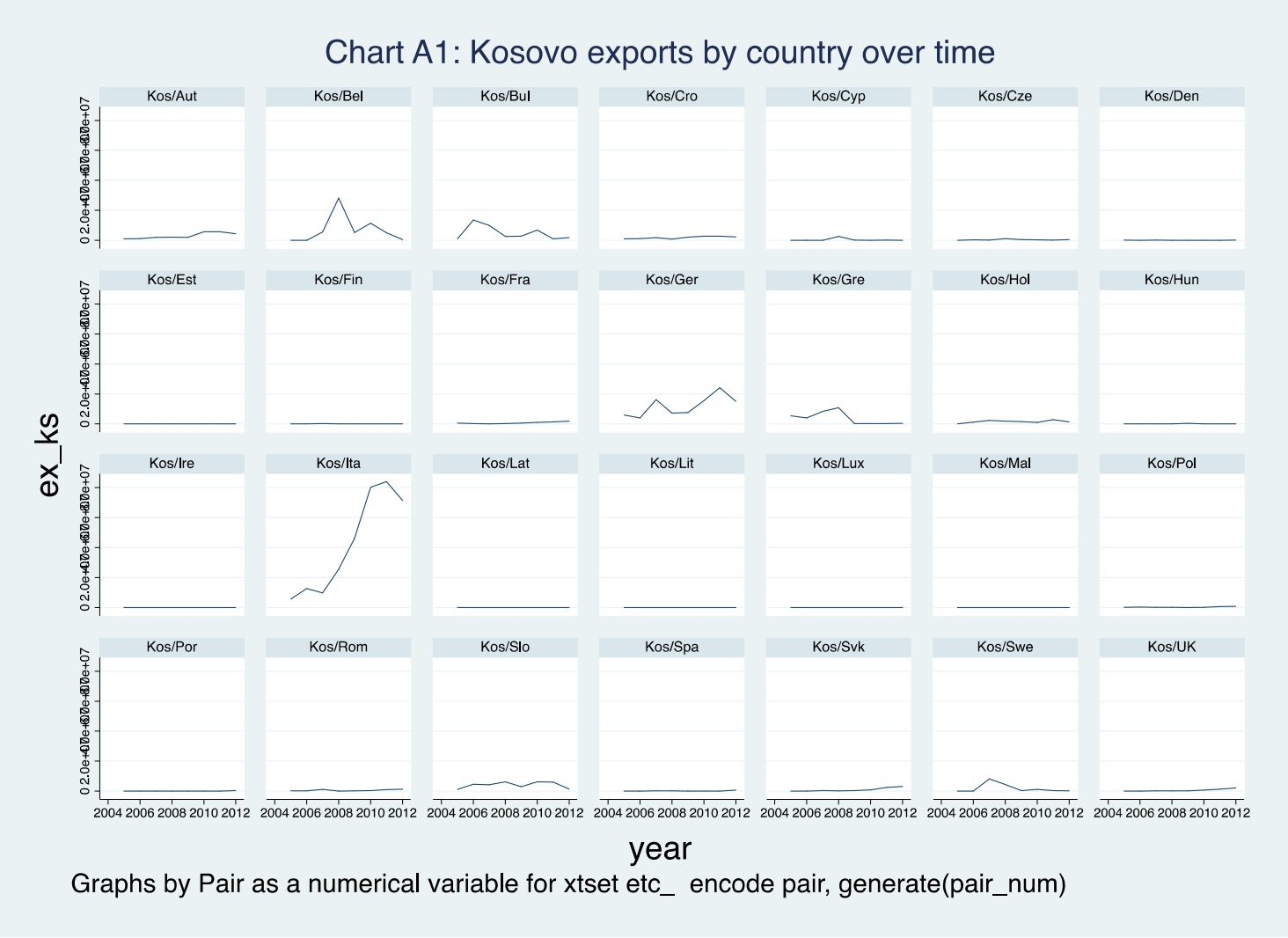


Chart A2: Kosovo mean exports by country over the sample period

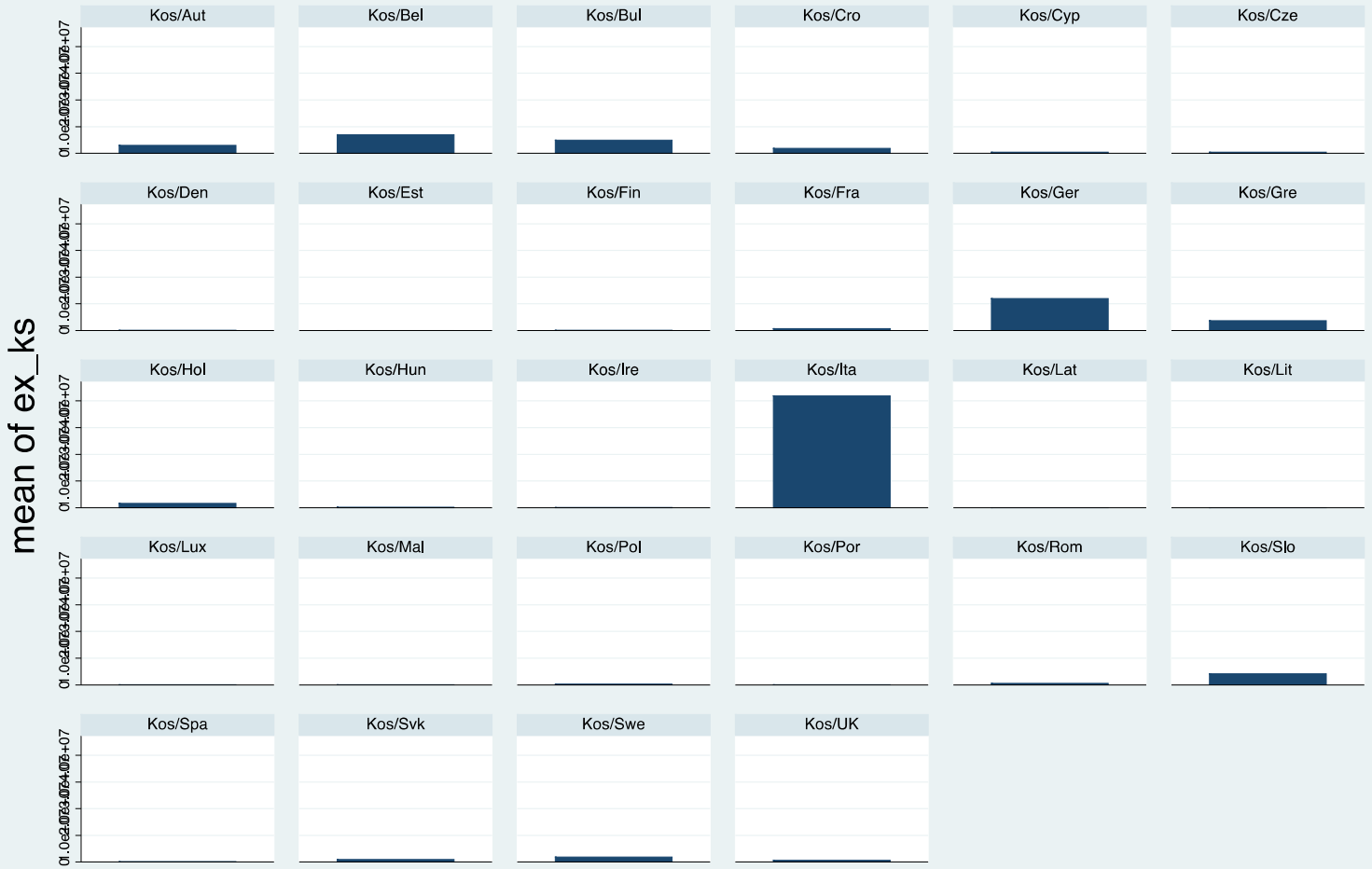
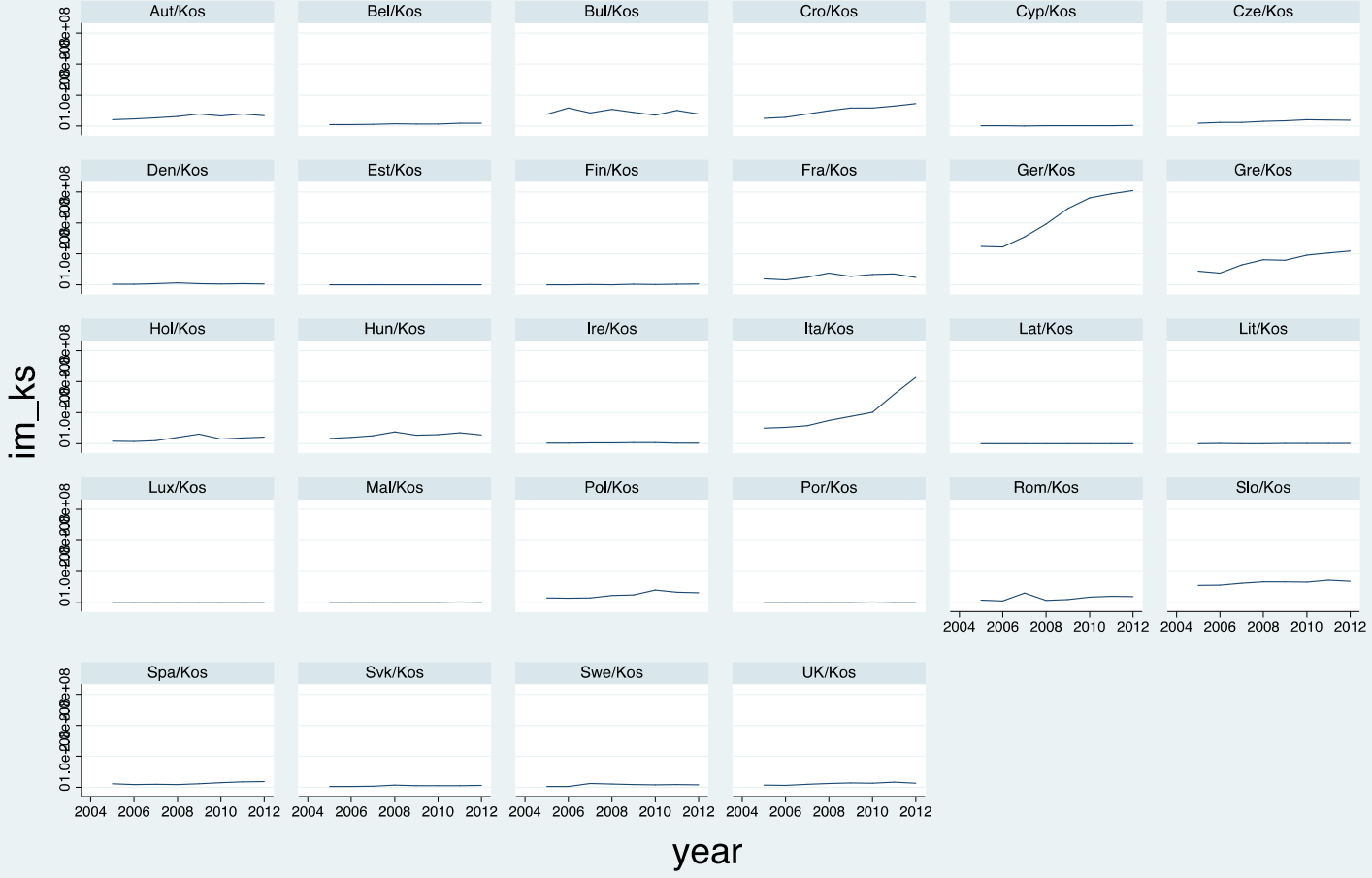
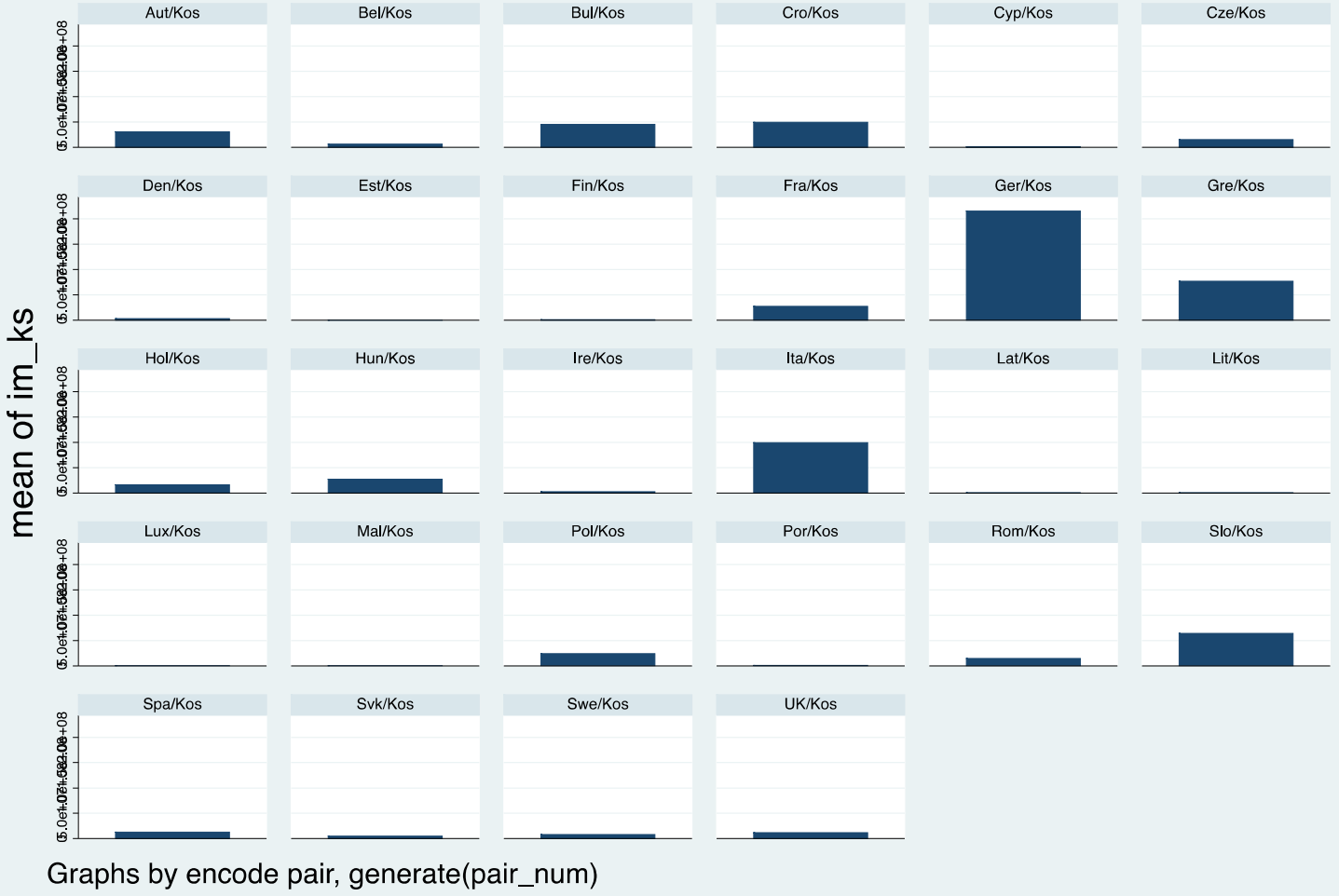


Chart A3: Kosovo imports by country over time



Graphs by encode pair, generate(pair_num)

Chart A4: Kosovo mean imports by country over the sample period



This study of Kosovo's trade with 28 EU countries over the period 2005-2012 reveals that trade liberalisation on its own will not promote balanced trade and economic development in Kosovo. Unbalanced trade – imports greatly exceeding exports – together with the persistence of historic patterns of exporting and the lack of responsiveness of Kosovo's exports to income changes - either in EU markets or at home - indicate lack of balance in Kosovo's economic development.

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