

The Political Economy of Economic Integration and Political Cooperation in the Middle East and North Africa: What Prospects for a 'Liberal' Peace

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Introduction

Like previous studies that have analysed the relationship between economic integration, interdependence and political cooperation/peace (see: Polachek, 1980; Barbieri, 1996; Copeland, 1996; Reuveny, 2001; Gartzke et al., 2001; Kanafani, 2001; Bearce, 2003; Oneal et al., 2003; McDonald, 2004; Bearce and Omori, 2005; Benson and Niou, 2007; Kilchevsky, et al., 2007; Saez, 2008; Aydin, 2010; Goldsmith, 2013) this study has clear policy implications for current political leaders in the Middle East and North Africa (MENA) and elsewhere. Since the late 1980s many governments in the MENA have adopted (to some extent, often wholeheartedly) policies aimed at integrating their national economies with the broader global economy and with each other in order to promote welfare gains (economic development) in their own markets. A second, albeit seemingly less emphasised goal, has been to promote regional stability/peace (through political cooperation). The impact of these policies on promoting trade within the region, and subsequently their impact on regional peace, is not understood. Commercial institutional peace analysis tends to consider all states in the global system and applies generalizable conclusions to all regions and states equally. Yet, a deeper analysis of the impacts of commercial institutions and trade in the MENA region (and other regions) may reveal a different story of the ways in which trade influences state behaviour. This study tests the validity of the commercial institutional peace theory in the context of the MENA region, and investigates how trade influences inter-state relations in the region.

Within the liberal peace research agenda we find the commercial institutional peace literature that investigates the impact of trade promotion policies on peace. As part of this research agenda, scholars in IR and IPE have argued that any two states with high levels of largely symmetrical bilateral trade and deep economic integration (through intra- and inter-industry trade

and investment) will result in high levels of embedded interdependence and this will promote peace between them through reducing the chances of war.

Hypotheses

This study considers the prospects for a liberal peace in the MENA by analysing two separate but inter-connected stages of the commercial institutional peace. Firstly, we need to consider whether commercial institutions in the region have promoted intra-regional trade. Secondly, we can then analyse if trade has had an impact on promoting peace within the region. One hypothesis is tested at each stage of this study. These are as follows:

Hypothesis 1: commercial institutions in the MENA region promote trade within the region;

Hypothesis 2: higher levels of largely symmetrical bilateral trade promotes peace by deterring aggression (deterrence arises because trade raises the opportunity costs of conflict, while at the same time increasing the rewards of cooperation). Therefore, increased trade and economic integration between MENA states will lead to increased political cooperation and greater potential for peace and stability at the regional level.

Commercial Institutions, Trade and Peace: understanding the debate

Kilchevsky et al. (2007: 647) have highlighted the need to 'move from the general insight offered by past studies to more region-specific models and analyses at lower levels of aggregation.' Furthermore, they observed that the theoretical argument that peace can be achieved through trade may 'not be as general as their authors intended or believed them to be' (ibid) and therefore more research is needed to develop our understanding of the extent to which this liberal notion is applicable to specific regions/groups of states and why. In their study, Kilchevsky et al. analysed the relationship between economic interdependence and peace between Egypt, Israel, Jordan and Turkey. By focusing on the nature of trade and changes in political cooperation/peaceful relations between a small group of states certain conclusions about the validity of the notion of trade promoting peace and what factors limit this outcome in the Middle East. Ultimately, Kilchevsky et al. demonstrate that while trade between the four states considered in their study remains low (and thus the impact on promoting peaceful relations between them in other areas also remains low), 'increasing economic linkages in the region can help stabilise the political situation' (ibid: 661). Given the limited levels of intra-regional trade in the MENA and the fact that 'the region has 'for the most

part, avoided the global trend of regionalism' (ibid: 648) it is perhaps more useful to analyse trade patterns and policies across the region. This study thus analyses a large scale set of relations, that demonstrate a greater level of embedded economic, political and institutional engagement in the MENA as this can provide further insights into the relationship between economic interactions, political cooperation, and stability at the regional level.

Kilchevsky et al. (2007) offer one of the most coherent of a still limited number of studies that seek to investigate how 'economic interdependence can be converted from a theoretical construct to a concrete reality' (ibid: 648) in the MENA. By using three least square regression analysis with conflict as the dependent variable and trade patterns as the independent variable they find that the four countries tested are more peaceful when they are more economically integrated (ibid). However, limiting their study to Egypt, Israel, Jordan and Turkey may distort the conclusions as the dyadic relationships tested are Egypt-Israel, Jordan-Israel, and Turkey-Israel, each of which is a relationship influenced by other independent variables such as treaties of peace which also provide for joint economic ventures (in the cases of Egypt-Israel and Jordan-Israel) or close defence ties (Turkey-Israel). Egypt-Jordan, Egypt-Turkey and Jordan-Turkey are not tested as dyads and little can be learned about whether or not they are more or less peaceful towards each other given greater or lesser levels of economic integration by an analysis that ultimately puts Israel as the central dyadic partner. Relationships between Egypt and Jordan, for example, are influenced by rather different interests, identities, histories, and processes to Egyptian-Israeli relations, some but not all of which are used as control variables by Kilchevsky et al. (who use: conflict, salience, symmetry, interdependence, relative power, difference in democratisation, contiguity and IGO membership as control variables). While Kilchevsky et al. offer a useful methodological starting point, understanding the nature of economic integration and its impacts on political interactions in the MENA requires a more comprehensive analysis that takes into account a larger range of dyadic relationships, and that considers a greater number of variables that inform trade policies and patterns.

Kilchevsky et al. (2007: 651-652) highlight two sources for 'events data' of dyadic interactions: Edward Azar's Conflict and Peace Data Bank (COPDAB) which uses newspaper sources to report on daily events; and Kansas Events Data Study (KEDS) which also relies on news reporting for political event data. The limitations of COPDAB are that it covers data from 1948 only until 1978 meaning it cannot be used to analyse more contemporary data that covers the period of time considered in this study. COPDAB does, however, quantify events by degree of conflict *and* cooperation (using a 15-point scale with 1 being the most cooperative and 15 the most conflictive). Kilchevsky et al. use the KEDS data source as this uses automated coding of English-language news

reports from 1979 until the present, thus generating a larger sample of events. KEDS also classifies events as cooperative or conflictive and offers a useful methodological approach for this study.

Kilchevsky et al. (ibid: 652-653) measure five trade variables: total dyadic trade, trade share by partner, salience (dependence on the bilateral trade relationship), symmetry (equality of trade share and dependence), and interdependence. This study will use these same variables plus membership of commercial institutions and will also consider a number of control variables (see below). Kilchevsky et al. (ibid: 654) measure four control variables: 'relative levels of power, differences in degrees of democratisation, contiguity and mutual [IGO] membership.'

IR scholarship has traditionally focused on whether or not trade promotes peace through reducing the prevalence of armed conflict. The incidence of armed interstate conflict has been the measure of the success or failure of economic integration as a means to prevent conflict and promote peaceful cooperation. For example, Oneal et al. (2003) have examined the causes of peace by analysing the relationship between trade and conflict by asking 'whether the Kantian influences – trade, institutionalized democracy, and joint memberships in intergovernmental organizations (IGOs) – affect the likelihood of militarized interstate disputes' (ibid: 372). Bearce (2003) has attempted to 'grasp' the commercial institutional peace by analysing how commercial institutions such as 'preferential trade arrangements help reduce the incidence of militarized inter-state conflict' (ibid: 347). Similarly, McDonald (2004: 547) explores how 'higher levels of free trade [...] reduce military conflict between states', while Bearce and Omori (2005), Saez (2008), Aydin (2010) and Goldsmith (2013) have all studied different aspects of the trade and interstate-conflict relationship. Yet, the focus on ways in which increased economic integration through trade (or specifically free trade in the case of McDonald (2004)) reduces the potential for interstate war does little to further our understanding of trade's effect on increasing cooperation in terms of raising the rewards and lowering the opportunity costs of cooperation, as opposed to raising the opportunity costs of war. Although Kilchevsky et al. do consider conflict to 'refer to actions involving the military [as well as] actions such as diplomatic protests and the breaking of bilateral agreements' (Kilchevsky et al., 2007: 649), they still focus on conflict in international relations as opposed to *cooperation*.

Aboud and Minow (2002: 14) put forward the case for an economics first approach arguing that 'economic interaction often leads to political adhesion' and noting that 'examples can be found in western Europe and eastern Europe and increasingly in Asia. Politics follows commerce because commerce provides mutual benefits across the broad expanse of the population, regardless of race, color, religion, or ideology' (ibid). The experiences of the world of business (where risks are taken far more readily than in the world of politics) certainly lend support to this notion. However, as Abboud and Minow themselves admit, '[g]etting agreement on the stabilizing potential of economic

development is easy. Translating that agreement into actual progress on the ground is tough' (ibid). Investigating the ways in which state policies in the MENA exhibit agreement that 'trade is good' is an important step (this study offers a discussion on trade policy formation below), but analysing how commercial institutions are established only takes us so far in our understanding of the political economy of trade and political cooperation in the region. Exploring how agreements translate 'into actual progress on the ground' in terms of political cooperation is an interesting avenue for research and one which this study pursues.

Lawrence Saez (2008) contributes to our understanding of the relationship between trade interdependence and conflict reduction by arguing 'that under certain specific conditions, trade interdependence is unlikely to occur and therefore the expected palliative effect of trade on militarised inter-state conflict cannot take place' (ibid: 698). While his study still focuses on the relationship between trade and inter-state war, which as discussed in this study limits our understanding of how trade can promote political cooperation in other areas of international relations, his assessment of the limits of trade occurrence is highly valuable. Saez's conclusions have direct implications for the effect of trade on various aspects of political cooperation (not just conflict reduction) and can be used to demonstrate when commercial institutions do not lead to greater trade and economic integration. The central thesis of Saez draws on neo-realist literature and states that 'trade is inherently conflictual' (ibid) and especially where the following conditions apply: 'where there is intermittent military friction [and] asymmetry among players' and where there is a regional hegemon, which 'is likely to be hostile to the interests of its neighbours' (ibid). A second argument posited by Saez is that states that have a history of military conflict with each other will not increase bilateral trade with each other, instead finding alternative partners to economically integrate with (ibid: 699). Yet as Page (2000: 62) highlights, 'it is precisely former enemies which may want to institutionalize the end of conflict'. Understanding when enemies become *former enemies* is, therefore, important. To test this position further it is necessary to examine the impact of commercial institutions on creating or diverting trade between member states.

Saez's main findings are that 'some regional economies are not structurally disposed to undertake trade' (ibid: 713); and that trade does not lead to peace when 'the conflict-reducing options that are contingent upon the nature of economic interdependence are not present' (ibid). One limitation with these conclusions, however, is that they are used interchangeably to support the central thesis that trade does not promote peace, when perhaps there are two separate questions being addressed that relate to whether trade takes place, and if it does what is the impact on conflict reduction. The relevance of Saez's work for the present study is how the first question is addressed and not the broader question of whether or not trade (when it does occur and when

economic integration leads to interdependence) leads to peace. This study reflects on Saez's conclusions about the former question.

Bearce and Omori (2005) have built on earlier commercial institutional peace research by investigating *how* 'regional commercial institutions produce their observed pacific effect' (ibid: 659). They tested three causal arguments: firstly, that commercial institutions increase opportunity costs for war; second, that commercial institutions provide information on trading partners' military capabilities, thus increasing their ability to bargain for peace; and third, that commercial institutions regularly bring high-level state leaders and decision-makers together which can help build trust (ibid). By using a statistical model that includes ten variables: trade interdependence, democracy, joint alliance, capabilities ratio, hegemony (measured by total GDP), contiguity, joint preferential Trade Agreement (PTA), economic integration (including FTA, customs union, common market, monetary union), nested military (structures within the commercial institution), and high organs (the number of formal forums for state leaders) (ibid: 668-669), and applying it to all region-specific politically relevant dyad-years from 1951-1985, Bearce and Omori conclude that only the third thesis tested is accurate.

Of particular importance here is the way in which they deal with the problem of which actors experience opportunity costs of war. If we consider states as unitary actors then we can rather superficially argue that increased trade raises the opportunity cost of war through loss of trade. However, as Bearce and Omori (ibid: 662) highlight: 'it is societal actors who conduct the bulk of international commerce, and thus, directly earn the profits of this exchange.' As commercial institutions are created and maintained by state actors, we need to question how they benefit from economic interdependence, or how higher opportunity costs of war affect their decision making. Bearce (2003) offers one solution here by considering states as autonomous actors that are not impacted on by societal (or 'market') actors. In this way it is possible to explore whether state actors directly suffer economically through war. However, this approach is limited when studying commercial institutions if most of the benefits are received by market actors. Instead we can approach states as autonomous actors that need vibrant markets in order to raise revenue through tax, thus reinforcing the interest that states have in promoting economic growth (through trade) and raising their opportunity costs of war (Bearce and Omori, 2005: 663). Another solution is proposed in this study and draws on work done by Polachek (1992) and Polachek and McDonald (1992), and highlighted by Barbieri (1996), in which [l]eaders are deterred from initiating conflict against important trading partners for fear of losing welfare gains associated with trade' (ibid: 31). We can consider the domestic-stability effects of economic growth in the MENA region as being highly important to perhaps the most central policy goal of governing regimes in the region: regime

survival. As most states in the region express authoritarian as opposed to democratic tendencies, *tenure* in office is not lightly considered, and the notion of political change as a normal process is often not respected. We can, therefore, consider economic gains by market actors as highly relevant to the state actors engaging in regional commercial institutions. If society gains from increased trade, so too do states through increased stability, likewise if society experiences economic hardship, for example, from war, then states also suffer through increased instability.

A further response to the problem of how states gain from increased economic integration and increased opportunity costs for war may be found in the relationship between state and market actors in the MENA. The distinction between state and 'societal' actors that Bearce and Omori highlight only applies in an ideal-type capitalist economy. The relationship between MENA governments and big business, for example, is highly complex and often ruling elites and economic elites are synonymous with each other.

Aydin (2010: 523) notes the limitations of focusing solely on the direct deterrent effects of bilateral trade in any given bilateral relationship. This rather narrow research interest, it is argued, has been the dominant focus of much of the literature on economic interdependence and international conflict, which has tended to omit bilateral trades indirect effect on third-party states. By going beyond the dyad-level analysis, Aydin concludes that 'extended deterrence success is most likely in cases where the defender and target are economically integrated through regional trade institutions as well as conducting heavy trade' (ibid). The conclusion that regional trade institutions (in this study referred to as a specific form of commercial institution) are important to the promotion of peace and stability is particularly noteworthy. Indeed, Aydin shows that an assessment of the impact of trade on political behaviour and relations between multiple states requires an appreciation of the role of regional commercial institutions and a large number of overlapping dyadic analyses. Furthermore, an analysis of this kind can offer insights into the impact that trade has on states directly engaged in trade with each other as well as the deterrence effect of economic and institutional integration on third-party states (states that are not directly engaged in said integration) (ibid: 524).

This position raises some important questions for the deterrence and peace promoting effects of GAFTA when considering that, as demonstrated by Elkhafif et al. (2012), Rouis (2012), Romagnoli, and Mengoni (2009), Abedini and Péridy (2008) among others, the evidence suggests that this agreement has had only a modest impact on increasing trade within the region overall, and much of this has been within sub-regions of the MENA (involving neighbouring states in the Maghreb or Gulf for example). Aydin (2010) argues that this framework to analyse the effects of trade on deterrence, assuming that '[i]f attackers are making use of the information about states'

interest in the continuation of trade [with their trading partners], they would avoid initiating conflict against trade partners that can flock together to protect their economic stakes when one comes under attack' (ibid: 524). It is important to note that Aydin's theory of extended general deterrence regards institutionalized trade as more relevant in deterring third party attacks than simple total trade volumes. Institutionalized trade refers to trade between states who are members of regional institutional arrangements (including organizations such as the Arab League, and commercial institutions such as GAFTA) (ibid: 528).

Bearce (2003) has noted that while much work has been done to advance the commercial institutional peace agenda, and 'this research programme now provides stronger empirical evidence that commercial institutions produce positive security externalities in the developing world, it still fails to delineate clearly *how* such institutions matter' (ibid: 348) (italics in original). Using a similar approach to Oneal et al. (2003) Bearce (2003: 349-350) tests the argument that commercial institutions effect international relations in several ways: first, by 'increasing the opportunity costs of war for the state'; second, providing state leaders with information 'about other states' military capabilities and [...] intentions'; and third, building trust between state leaders by bringing them on a regular basis. One limitation with this final argument, however, is that the role of security apparatus and considerations is quite prominent in Bearce's analysis. In particular, if the commercial institution being studied is embodied in an international organization (and not just an agreement) that deals with security in a traditional sense (considering war, sovereignty, military security and survival) then the argument that commercial institutions offer state leaders the opportunity to meet to discuss security issues stands up. But if the commercial institution exclusively relates to liberalizing trade between member states, and is just one agreement (among potentially many) formulated and maintained by an organizational forum that deals with economic and social issues (like the Economic and Social Council of the Arab League that oversees GAFTA) then the argument is harder to support.

Bearce contributes to the commercial institutional peace research in several ways, but perhaps the most important (and relevant for this current study) is the way in which much literature offering theoretical explanations of the impact of trade agreements, for example, on peace can tell us something about the western world, but not as much about developing regions (ibid). The current study focuses on the MENA region and GAFTA specifically to seek answers to how this region has come to experience regional commercial institutions.

Oneal et al. (2003) examine the what they term the causes of peace, by analysing the impact of democracy, economic interdependence (as measured by trade) and membership in international organizations. They examine the three legs of the Kantian tripod (republican constitutions, cosmopolitan law (free trade and economic interdependence), and international law) but see the

second as the most important (ibid: 372). In their work, Oneal et al. highlight the policy implications of the peace research agenda, and in particular the importance of understanding the relationship between each Kantian element when recommending 'that policymakers promote democracy and trade internationally and participate in international organizations as a means of promoting world peace' (ibid). By using the Correlates of War (CoW) project they study the onset of militarized disputes ('in which either state threatened to use force, made a demonstration of its military capabilities, or actually used force against the other' (ibid: 376)) as well as fatal disputes ('in which at least one member of the armed forces of the parties to the conflict died' (ibid)). They also use the Polity III data to assess the political character of governments (on a scale of democratic to authoritarian regimes), and the IMF's Direction of Trade data to examine patterns of trade. To assess membership in intergovernmental organizations the Yearbook of International Organizations is used. Three other variables are also included in their analysis: capability ratio (balance of power), alliance (formal treaty of alliance), and contiguity and distance.

In regards to trade Oneal et al. find that there is a pacific effect, with economic interdependence having a significant impact on reducing the risk of fatal disputes and wars (ibid: 387-388). Interestingly, however, the nature of governing regimes also is found to have robust impact on promoting peace, with democracies that trade significantly with each other being least likely to engage in militarized conflict. This finding has serious implications for an assessment of the impact of GAFTA as all member states are non-democracies. This raises questions about the impact of GAFTA on firstly, promoting trade, secondly reducing the chance of militarized conflict between member states, and finally, on promoting political cooperation overall.

Goldsmith (2013) takes a rather different direction in trade and peace research by 'integrating expectations from schools of thought often portrayed as incompatible [to analyse] two aspects of trade – volume and interdependence – and model conflict as a two-stage process involving onset and escalation' (ibid: 555). By considering trade as the key variable, and not exploring the effects of other variables Goldsmith offers an explanation of the impact of trade that does not account for the simultaneous effects of forms of governance, institutional membership, contiguity/proximity, and history, for example. But he does highlight that there is still much to be researched and he offers some insights into how we can deepen our understanding of the ways in which patterns of trade can effect international relations.

Goldsmith ultimately concludes that trade can have both a positive and negative effect on international relations at different times. In some cases trade does inhibit conflict between states, but it can also facilitate it under certain conditions (ibid: 575). Specifically, he finds that: 'trade interdependence inhibits the onset of militarized disputes, trade volume increases the risk of the

onset of militarized disputes, there is no relationship between trade interdependence and conflict escalation, and trade volume inhibits the escalation of militarized disputes to deadly interstate violence' (ibid). The second conclusion is perhaps the most interesting, and unexpected if one adopts widely held assumptions about the liberal peace. This suggests an avenue for research concerning the effects of GAFTA and trade volume and interdependence at the regional level in the MENA. Goldsmith's argument centres on the hypothesis 'that trade interdependence, representing the opportunity costs of conflict, is likely to deter conflict *onset*, but that high volumes of trade, by increasing potential sources of tension, will make onset more likely [but] these roles reverse once a conflict has begun and states consider escalation to war' (ibid: 556) (italics in original). A useful contribution made here is to posit a distinction between trade interdependence and trade volume: the former relating to the proportion of dyadic trade to each state's overall trade; and the latter relating to the amounts of specific traded goods or services (some of which may be more sensitive, valuable, or essential than others, and will thus, be considered differently in policy-making calculations).

Importantly, Goldsmith (ibid: 558) considers total trade value as a proportion of gross domestic product (GDP) as well as total trade. The implication here is magnified when trade-related income represents a larger proportion of overall GDP. Given that many MENA economies are quite dependent exports (of hydrocarbons, for example) to raise revenues and foreign hard currency, and/or imports to meet domestic demands for goods (food, for example) and services that cannot be produced/provided domestically, viewing economic interdependence in a more nuanced manner may be necessary, and may provide more greater insights. However, one limitation in Goldsmith's approach is that his logic of opportunity costs and signalling 'rely on trade dependence being *observable prior to the onset of a conflict*' (ibid) (italics in original) without taking into account the impact of perceptions about future opportunity costs as measured, for example, by estimations of potential future levels and nature of trade. One could posit that state leaders would maintain peaceful relations with their trade partners if doing so would promote expected future trade. An appreciation of the expectations of decision-makers responsible for creating and implementing commercial institutions would be necessary here though.

In a similar manner, Benson and Niou (2007) argue that the economic interdependence literature fails to consider 'states' decisions to trade and initiate conflict as a function not only of their own utility but also of their perceptions about how their opponent will respond' (ibid: 35). They develop a model that includes an analysis of states' decisions to trade or engage in conflict by including social links, social contacts, and trust and respect as variables. Central to their study is the concern with the interplay between these variables and potential asymmetry in economic

interdependence, where one actor in the dyad is more economically reliant on the other. Benson and Niou note 'that asymmetries in economically integrated dyads are likely to create incentives for the less dependent actor to exploit its bargaining leverage to manipulate the more dependent actor' (ibid: 39).

This approach certainly has some value and has helped to further our understanding of the trade-peace relationship, however, it risks placing too much emphasis on state actors without considering society/market actors and their role in initiating and maintaining trade. This poses problems because state are not the primary actors engaged in the production and exchange of goods and services. As Barbieri 1996: 31) notes, at least for liberal scholars, 'trade patterns emerge naturally as a result of given heterogeneous factor endowments'. While Benson and Niou's claim that the '[f]ailure to endogenize decision-makers' choice to trade is a critical short-coming of existing trade studies' (ibid: 40) is valid, this critique ignores the possibility that state leaders do not in fact have the power to *decide* whether or not to trade. Analysing market forces can prove far more fruitful in understanding why and how trade takes place as this approach allows us to examine the actual actors involved in production, exchange and consumption (which includes state actors only to some extent). Indeed, if the argument that states decide whether to trade or not is accurate then the establishment of commercial institutions like GAFTA and other FTAs would automatically result in increased trade. This is, however, not guaranteed and empirical studies have shown that the implementation of an FTA does not always have any impact on trade patterns. Studies that fail to differentiate between states and markets often prove ineffective (see: Strange, 1994).

Benson and Niou's model leads to conclusions that differ from similar studies. Instead of trade leading to peace, they conclude that there is 'no unconditional relationship between trade and peace, but widespread opportunities for bluffing actually increase the unintended chances of conflict' (Benson and Niou, 2007: 45). The contribution made by Benson and Niou is evident, yet is still incomplete. A consideration of market forces (and how they are perceived by state actors if one considers states as the primary focus) could reveal more about the nature of trade patterns and the impact on other aspects of international relations, and vice versa.

According to Barbieri (1996: 30) we can identify four overarching theoretical approaches to understanding the impact of trade on international relations: first, that trade promotes peace (a liberal argument); second, symmetrical trade promotes peace while asymmetrical trade promotes conflict (a neo-Marxist approach); third, trade increases inter-state conflict (a neorealist argument); and finally, trade has no impact on interstate conflict. Barbieri's work has furthered the commercial institutional peace agenda by re-examining the relationship between economic interdependence and peace/conflict by considering the impact of varying levels of interdependence on state

behaviour. She takes a historical approach and analyses the impact of economic interdependence on interstate relations during the 19th and 20th centuries, and finds that '[r]ather than inhibiting conflict, extensive economic interdependence increases the likelihood that dyads will engage in militarized interstate disputes' (ibid: 29). Furthermore, '[e]xtreme interdependence, whether symmetrical or asymmetrical, has the greatest potential for increasing the likelihood of conflict' (ibid). These conclusions run counter to the dominant hypothesis that trade promotes peace and Barbieri's work encouraged further investigations to test her model. Key to this approach is consideration of both the benefits *and costs* of trade. The latter has generally been ignored by liberal scholars who focus on the positive effects of trade as a means to understand increased opportunity costs and increased rewards from trade. Barbieri (ibid: 31) notes that if costs are greater than benefits then trade may lead to conflict rather than peace, especially in an asymmetric trading relationship.

It is important to note here that drawing on Keohane and Nye (1977), interdependence and interconnectedness are seen as distinct from each other, with the former representing extensive mutual vulnerability and sensitivity, and the latter representing weak linkages between states. Barbieri tests four hypotheses: '*[d]yads composed of states with salient economic relationships are less likely than other dyads to engage in militarized conflicts; [d]yads composed of states with symmetrical dependence are less likely than others to engage in militarized conflicts; [t]he presence of both extensive and mutual dependence – interdependence – reduces the likelihood that dyads will engage in militarized conflicts; [t]he interactive and additive effects of the two dimensions of interdependence – salience and symmetry – reduce the likelihood that dyads engage in inter-state conflict'* (Barbieri, 1996: 34-35) (italics in original). These hypotheses are tested by analysing several variables for 14,341 dyad years from 1870-1938. The dependent variables are: militarized interstate disputes and interdependence; while the control variables are: contiguity and geographic proximity, joint democracy, relative capabilities, and alliance ties.

One limitation here, however, is that Barbieri focuses 'exclusively on conflictual events, assuming that the absence of intense conflict, rather than the presence of cooperation, is more consistent with the notion of peace' (ibid: 35). The argument that the absence of conflict is more consistent with peace is valid yet international relations are rarely characterised by conflict or cooperation alone. Instead states should be seen as having multiple interactions in different areas of their relations with other states. Furthermore, it is limiting to see states as unitary actors where the same governmental offices and people are involved in all forms of international relationships. In other words we need to account for the ways in which different state institutions interact with their counterparts in other states (in addition to other parts of their own state apparatus). Taking into

account cooperative events in addition to conflictual events (which, after all, do not exclusively relate to militarized disputes) could offer more insights into trade's effect on cooperation.

Barbieri concludes that, according to the results of the full interdependence model employed in her study, 'the extension of trade linkages will inevitably lead to an increased probability that dyads engage in militarized disputes' (ibid: 40). Furthermore, 'when interdependence is at its maximum, dyads are 25 times as likely to engage in a MID than when interdependence is at its minimum' (ibid). These findings are contrary to much of the scholarship that supports the liberal peace thesis. A reason for this disparity may be the differences in time periods analysed (with Barbieri focusing on the pre-World War Two period, and other studies considering longer periods with data up to the early 2000s). Another might be the exclusion of some variables such as the impact of the perceptions of state leaders; the impact of trust, norms and formal mechanisms for state leaders to communicate; cultural similarity; and historical relations.

Oneal and Russett (1999) have tested the 'pacific benefits' of economic integration (through trade) and democracy and IGO membership. They posit a set of assumptions that rely on Kantian logic and elements shared with realist thought relating to anarchy and power. They assume that the international system is characterised by anarchy and that 'power is important' (ibid: 4). They also see states as being constrained by 'power, alliances, and distance' and as being 'concerned with 'the balance of power and the coincidence of national interests expressed in alliances' (ibid). Distance from one another is also considered as an important variable that shapes the nature of inter-state behaviour with Oneal and Russett arguing that 'in general, the farther apart two states are, the fewer the issues over which to fight and the less threat they pose to one another' (ibid). Their theoretical model uses these assumptions as a foundation against which they assess the impact of economic integration, democracy and international law. By adding variables that relate to the Kantian tripod Oneal and Russett test three hypotheses: first, that democracies are less prone to using force; second, that 'economically important trade' promotes peaceful relations; and third, that international organizations promote peace (ibid: 4-5). Of particular importance to the present study is the second hypothesis.

As Oneal and Russett highlight '[e]vidence for the pacific benefits of economic interdependence [...] is less widely accepted than is that for the democratic peace' (ibid: 5) and their work has sought to investigate this are further. Furthermore, they argue that the effects of trade on international relations have been subject to more counter-arguments than the other two Kantian hypotheses. This is evidenced by the work of Barbieri (1996), Benson and Niou (2007), and Goldsmith (2013) who conclude that increased trade either can or even does lead to conflict being more likely. One of the limitations to the methodology used by Oneal and Russett (1999: 9),

however, is that only 'bilateral trade as a proportion of gross domestic product (GDP)' is used as a measure of economic integration and economically important trade/economic interdependence. As has been demonstrated elsewhere, and as argued for in this study, measuring and examining the nature of trade and its impact on economic integration (and how this is perceived by state and market actors) needs to be more sophisticated. In particular, considering trade as a proportion of total trade (and not just GDP) per dyadic member, trade volume by specific goods and services, and trade compatibility, offers greater insights.

After examining 6,000 dyads and approximately 150,000 observations from 1885-1992 Oneal and Russett find that 'democracy, economic interdependence, and involvement in international organizations reduce the incidence of militarized inter-state disputes' (ibid: 34). In terms of trade, this effect is very significant with important trade integration leading to a reduction in the likelihood of a MID by over half. At the systemic level Oneal and Russett conclude that 'the international system is more peaceful when there are more democracies and when trade is greater' (ibid). Like most of the other literature on the Kantian peace or broader commercial institutional peace research, Oneal and Russett's findings represent a universally applicable set of conclusions as the data they analyse covers all states. This provides us with an opportunity to test whether there are variations in these findings if smaller groups of states are considered, that is, at the regional level. Does trade and economic integration in the MENA, for example, lead to a reduction in the likelihood and occurrence of MIDs in that region as Oneal and Russett's findings would suggest? If there was variation then this would tell us that something about the MENA region is somewhat unique, or at least different, from other regions/the world as a whole.

Kim and Rousseau (2005) have re-examined Oneal and Russett's (1999) model and findings and by considering the reciprocal causation/the simultaneity problem between economic interdependence and military violence, this being the effect that trade has on MIDs and vice versa. They use a two-stage probit least squares approach to control for this reciprocity and re-analyse Oneal and Russett's dataset and find that economic interdependence does not reduce the possibility of conflict between trade partners while 'international conflict reduces economic interdependence' (Kim and Rousseau, 2005: 523). Kim and Rousseau explore the effect that the simultaneity problem has on twelve hypotheses that they have identified as most common explanations of military conflict found in the liberal peace literature. The most relevant hypothesis tested for this current study is: '[i]n an international dispute, the more economically interdependent a state is with its adversary, the less likely it is to use military force to resolve the dispute' (ibid: 524). Of particular note here, is that the model used by Kim and Rousseau finds that 'states that share preferential trading agreement(s) [...] are more likely to be interdependent with each other; but, economic

interdependence is higher between states across regions rather than within regions' (ibid: 540). Nevertheless, their key finding is that economic interdependence does not .

A strength in Kim and Rousseau's work is that they consider a large number of variables often not considered by others at the same time, including: levels of democracy; balance of forces; shared alliance ties; satisfaction with the status quo; contiguity, distance and major power; different civilization group; conflict interaction level; GDPs and populations; and shared preferential trade agreement membership (ibid: 531-532). A limitation to the application of this model, however, is that while the simultaneity problem is considered, the overall conclusion that war reduces economic interdependence is not new (and is highly expected), and the assessment that this finding reinforces the argument that economic interdependence does not reduce the likelihood of MID's is somewhat unoriginal (Copeland (1996) and Reuveny (2001) amongst others have already demonstrated this quite conclusively). A deeper analysis of the ways in which the nature of trade impacts broader international relations is necessary.

Copeland (1996) offers one of the earliest post-cold war investigations into the relationship between trade and war by asking '[d]oes economic interdependence increase or decrease the probability of among states?' (ibid: 5). Copeland highlights that while much IR scholarship has dealt with the causes of war, with liberals and realists in particular offering diametrically opposed conclusions about which variables are relevant, '[e]conomic interdependence is the only factor that plays an important causal role in the thinking of both [liberal and realist] camps' (ibid). For Copeland there was a need to further examine the relationship between trade and conflict in international relations because the dominant liberal and realist approaches proved insufficient in explaining the relationship and predicting future international relations. In particular, while liberals argue that 'interdependent states would rather trade than invade' and realists argue that '[i]n anarchy, states must constantly worrying about their security [and] mutual dependence and thus vulnerability [...] gives states an incentive to initiate war' (ibid: 5-6) neither school can adequately explain the causes of major wars such as the two world wars. It is important to note that this is still largely the case with competing arguments and findings. Copeland uses the theory of trade expectations to overcome the failures of both liberal and realist approaches. This theory assumes that '[t]he total of the benefits and potential costs of versus autarchy reveals the true level of dependence a state faces, for if trade is completely severed, the state not only loses the gains from trade but also suffers the costs of adjusting its economy to the new situation' (ibid: 6). Of particular importance here is the inclusion of an under-used variable: expectations of future trade. Considering this variable allows us to bring in the decision-makers as significant actors in determining state behaviour and lets us move beyond

simply viewing states as rather unitary actors responding in the same way to the same conditions across space and time.

Copeland examines both levels of interdependence and expectations of future trade at the same time and argues that high levels of interdependence 'can be either peace-inducing or war-inducing, depending on the expectations of future trade' (ibid: 7). In other words, where states are highly economically integrated with others but feel their ability to trade will be hindered/limited in the future the realist assumption that trade can lead to war may prove to be correct, while if said state's expectation is that trade in the future will be high then the liberal assumption of trade promoting peace will be correct. Assuming that trade can lead to either conflict or peace is quite unique in the commercial institutional peace research and broader liberal peace research and is one of the strengths of Copeland's work. He ultimately concludes that the liberal view that international institutions along with trade can promote peace by the former ensuring positive future expectations of the latter, but also that 'poor bilateral diplomacy' (ibid: 41) can remove the pacifying effect of trade by leading to negative future expectations. We can, however, find weaknesses in Copeland's methodology as he only applies his theoretical model to a small number of historical cases. It is necessary to apply this approach and consider the variable of future trade expectations to a larger sample of cases and include other variables to fully appreciate the impact expectations can have.

Reuveny (2001) has contributed to our understanding of how trade does not necessarily lead only to conflict/only to peace by developing a mathematical model of dyadic trade and political conflict/cooperation. This model 'predicts that the effect of bilateral trade quantity on conflict/cooperation and the effect of conflict/cooperation on the monetary value of trade may be positive or negative, whereas the effect of conflict on trade quantity will be negative' (ibid: 132). Reuveny's starting point is an appreciation of the observations made by various unidirectional statistical studies that have found that trade affects conflict/cooperation, and others that have found that conflict/cooperation affects trade. Reuveny builds on Copeland's (1996) work by examining the possibility that trade and conflict/cooperation impact on each other in different ways given different contexts. Reuveny does this by replacing the unitary state actor with three types of actor (government, importer and exporter in each dyad state) (ibid).

One of the most intriguing findings made by Reuveny is that there are differences in the relationship between trade and conflict/cooperation when considering relations between Eastern and Western states on the one hand, and between states within the West on the other. Specifically, Reuveny finds that 'the East-West trade and conflict nexus is generally more significant than the West-West nexus and is potentially more sensitive to conflict' (ibid: 132). The implications of this finding are that trade does not have one universally applicable effect on other areas of international

relations (and vice versa) and that different regions can experience the impact of trade in various ways. This raises questions about the impact of trade within specific regions (and not just between states across regions) outside of the West. In the context of this current study: the MENA region. The overarching finding made by Reuveny is that ‘trade and conflict theories may miss important elements, pointing out the need for richer, more microfounded theoretical models’ (ibid).

Reuveny’s approach is also useful in demonstrating the possibility of opening up commercial institutional peace and broader liberal peace research to include more factors. In his work, Reuveny considered three aspects of trade and conflict that had previously largely been ignored: ‘trade and conflict simultaneity, action-reaction conflict/cooperation dynamics, and the identity of trade and conflict actors’ (ibid: 133). A limitation (as rightly highlighted by Reuveny in his work) is that trade is not disaggregated in Reuveny’s model and so there is no means to differentiate between the effects of sensitive and non-sensitive trade. The make-up of trade and the impact of trade sensitivity are considered in the current study.

Gartzke et al. (2001) offer an interesting approach to focusing our analyses to develop our understanding of how economic interdependence effects international conflict and other areas of international relations. A key initial observation made is that ‘cross-border economic relationships are far broader than just trade’ (ibid: 391). This is reinforced by the fact that ‘[g]lobal capital markets dwarf the exchange of goods and services, and states engage in varying degrees of monetary policy coordination’ (ibid). By analysing capital flows and monetary policy as well as trade in goods and services, Gartzke et al. deepen our understanding of the ways in which disruption to economic linkages can deter conflicts. Their findings suggest that ‘capital interdependence contributes to peace independent of the effects of trade, democracy, interest, and other variables’ (ibid).

Overall, Gartzke et al. argue that ‘[e]conomic interdependence *can* motivate peace in two ways (ibid: 400) (emphasis in original): first, by raising the costs of conflict relative to the expected benefits, and second, by ‘conveying credible signals, obviating the need for costly military contests’ (ibid: 401). Furthermore, capital flows are central to this pacific effect, because ‘[c]apital interdependence [allows] states to engage in costly signalling and reducing the need to resort to violence to obtain settlements’ (ibid: 402). It is important to note that Gartzke et al. do not contend that all conflict is avoidable, rather they argue that economic interactions can help to resolve disputes without resorting to violence. Their argument is tested by developing the methodology used by Oneal and Russett (1999). Their dependent variable is the onset of a MID (as common, coded as 1 for a dyad year in which the force is threatened, displayed, or used, and zero if not) with a key difference being the consideration of MID onset as opposed to involvement as used by Oneal and Russett. Two independent variables are used to measure monetary interdependence (‘pegging’,

coded as 1 for the existence of pegging one currency to another, and zero otherwise; and 'joint currency area', coded 1 if the states in a dyad both peg their currency to the same third currency, and zero otherwise). A further two variables are used to measure capital investment (capital openness, and capital flows). Several control variables are used: interdependence, regime type (democracy or autocracy, rates of change in GDP per capita (to measure economic growth), geographic contiguity, allies, and capability ratios. 'Affinity' is used to control for preference similarity.

One limitation with this methodology, however, is that while measuring capital investments adds another dimension to our understanding of economic interdependence, the problem of how state actors relate to capital flows remains. So while Gartzke et al. convincingly highlight that 'capital seeks higher risk-adjusted returns [and] risk is contingent on government restrictions' (ibid: 407) it is unclear how governments benefit from capital flows, and therefore, how capital investment factors into governmental decision-making. A mechanism to resolve this problem by examining the relationship between decision-makers the state *and* market, as well as the capital-related policy interests of the former, is necessary. It is misleading to assume that all states always perceive capital as a vital interest. We may, for example, find it useful to understand the relationship between big business (the real beneficiaries of capital investment) and government.

McDonald (2004) builds on earlier research on the liberal peace 'by exploring another resource of domestic variation – the extent to which governments regulate international trade' and argues that 'a shift from aggregate trade flows to the level of free trade as the crucial independent variable, provides the opportunity to push the debate forward' (ibid: 548). Central to McDonald's approach is the observation that increasing trade tends to both increase overall national economic prosperity but at the same time also alters the domestic distribution of income. Some domestic groups (actors in import-competing sectors, for example), therefore, are likely to resist greater economic integration and will not 'lobby the state for a pacific foreign policy that promotes expanding transnational economic ties' (ibid). Free trade removes the foundations of domestic privilege for those groups who are likely to resist economic integration in the form of imports, and thus reduces the capabilities of these groups to 'reduce the capacity of free-trading interests to limit aggression in foreign policy' (ibid: 549). McDonald bring the domestic level of analysis into the analysis of the pacific effects of trade.

To measure the level of trade protection within a state, McDonald uses two key indicators: 'the ratio of a country's customs duties to its total imports' (ibid: 557) and 'political barriers to trade' (ibid: 558). To test the hypothesis that higher levels of protection will lead to higher probability of conflict, he uses the standard dyad-year as the unit of analysis and several variables are examined.

The dependent variable is the onset of a MID (with the value set at 1 for onset in the first year, and zero otherwise). In order to ensure robustness, the following control variables are used in McDonald's model: democracy (scores for each state are allocated on the scale of -10 to 10 using the Polity 4 dataset); GDP for the largest economy in the dyad (this variable is included to control for any possible effect increased trade may have on military capabilities through increasing economic resources); economic growth (measured by the percentage change in GDP per capita over three years); alliances; interests; capabilities ratios; major power; contiguity; and distance. McDonald ultimately concludes that '[f]ree trade reduces military conflict in the international system by undermining the domestic political power of interests that benefit from conflict and by limiting the state's ability to enact commercial policies to build domestic coalitional support for its war machine' (ibid: 568-569).

McDonald's approach is quite valuable and the focus on domestic processes and relationships is somewhat more compelling (and effective in terms of the overall analysis) than analyses that consider states as unitary actors with no significant variations between them. However, there is a limitation to this approach and room for further investigation. Namely, the mechanisms by which the relationship between governmental actors and domestic pro/anti-trade groups within the state are played out (and indeed, the ways in which governments can market actors can overlap) has not been fully developed.

Polachek et al. (1994) build on some of the earlier peace research literature that analysed trade's impact by introducing new variables into older models. They argue that foreign aid, tariffs, contiguity and relative country-size also need to be analysed as independent variables (ibid: 405). By integrating these additional factors into their methodology Polachek et al. are able to demonstrate how trade affects conflict/peace in a more robust manner than earlier studies that only considered total levels of bilateral trade and levels of interdependence by dyad. They find that foreign aid and contiguity increase the gains from trade, while tariffs have the opposite effect. Furthermore, their findings concretely demonstrate that the benefits from trade (and therefore, the promotion of peace and cooperation) are greater for small states when they trade with large states, than for small state-small state trade. Likewise, for large states greater benefits are experienced when trading with other large states than with small states (ibid: 418). A key element of their methodology is to acknowledge that while most studies use a dyadic approach (as Polachek et al. do) it is necessary to extend the model of analysis because any 'two countries do not trade in a vacuum independent of other countries' (ibid: 409). Thus they include third party conflict in their analysis in a similar way to Aydin (2010).

In many ways a front-runner to more recent analyses, Polachek et al. hypothesise that along with the five independent variables highlighted above, third party considerations also have an impact on how trade affects conflict. They hypothesise that '[a]n actor with improved terms of trade [...] with a target [country] will decrease conflict with a third party [...] if the third party and target are friends' (ibid: 411). Furthermore, '[a]n actor with improved terms of trade with a target will increase conflict with a third party, if the third party and target are rivals' (ibid). Ultimately, they find that these hypotheses are correct. Yet, while Polachek et al.'s approach has developed our understanding of the impacts of trade on conflict/peace, there are limitations in terms of the independent variables measured. Their model leaves no room for an assessment of the impact of a range of variables that (as discussed above and below) according to other works, are demonstrably important: including, institutional membership, cultural affinity, the history of the dyadic relationship, and military capabilities. A limitation with many of the models employed in the liberal peace literature, especially investigations of trade and commercial institutions, often are limited by the relatively small number of variables considered, with few studies including all of the relevant variables at once.

Methodology

This study examines the relationship between commercial institutions, trade and peace between 21 states in the MENA region and a total of 420 dyads. The unit of analysis is dyad-year over the period 1950-2014, totalling 26,880 dyad-years.

This study is carried out in two stages, each relating to one of the key hypotheses being tested here. Each phase has one independent variable, one dependent variable, and a number of control variables (see below). The first stage explores the relationship between commercial institutions (stage one independent variable) in the MENA and trade volume (stage one dependent variable). The second stage explores the relationship between trade (stage two independent variable) and peace (stage two dependent variable) in the MENA. Again, a number of control variables are included.

Stage one

The independent variable – *Commercial Institutional Membership*

This project classifies commercial institutions into five categories depending on degree of intensity. A dataset has been created for commercial institutional membership. The data was collated from

World Trade Organisation country reports and corroborated by respective national ministries. This dataset contains scores for each dyad on a scale of 0-5 using the following approach:

Score	Coded by Highest Level Engagement
5	Economic Union
4	Common Market
3	Comprehensive FTA (bilateral or multilateral) – goods and services with limited exemptions
2	Limited FTA (bilateral or multilateral) – goods only, limited exemptions
1	Weak FTA (bilateral or multilateral) – goods only, significant exemptions
0	No CI membership

The Dependent Variable – *Trade Volume*

The creation of a dataset on bilateral trade between states in the MENA region was accomplished using the International Monetary Fund’s Direction of Trade Statistics database. Data was collated in current US\$ for each dyad-year for the period 1950-2014 (or from the year of independence, for example, 1956 for Morocco).

The control variables

1. *Trade compatibility/ trade congruence*

Saez (2008) employs a useful concept of trade congruence/incongruence as being central to understanding the structural promotion/inhibition of bilateral trade. Here the structure of each states’ export base (their leading export goods and services) and import base (their leading goods and services imports) are important. Where one dyadic state’s export base is equivalent to its partner’s import base, this state can be classed as ‘unilaterally congruent’ (ibid: 708). If both states’ exports bases are equivalent to each other’s import bases the dyad is classed as bilaterally congruent (ibid). If neither state’s export base is equivalent to the other’s import base then the dyad is incongruent (ibid). Saez uses a scale of equivalency positing that economies are not fixed and can change over time, becoming more or less congruent with others. This study uses the concept of trade congruence/incongruence to understand the *potential* for trade.

Shui and Walkenhorst (2010: 267-295) use a bilateral product complementarity index to examine how similar the export basket of one state and the import basket of the other in a dyad are. The value of their index ranges from 0 when there is no complementarity, and 100 when there is perfect complementarity. Here 'the higher the index between two countries, the greater the product complementarity' (ibid: 277) and thus more bilateral trade is likely due to market factors and government policies aimed at promoting trade (such as the creation of commercial institutions like GAFTA).

2. Contiguity and proximity/distance

As highlighted above, even in a globalising world, distance places demands and constraints on the transportation of goods, resources and people. Trading over greater distances may be limited in some respects due to the time and cost involved (for example, trade in fresh agricultural produce can be constrained by the time required to travel greater distances. Increased transport costs can reduce profits, thus lowering the exporter's incentives to trade). Dyads are coded as 3 if the dyad states share a land or littoral border; 2 if they are separated by one state; 1 if they are separated by two states; and 0 if they are separated by three or more states. While Oneal and Russett consider proximity relevant in the context of the ability of one state to deploy military capabilities to attack another, this study considers proximity relevant to facilitating trade (through increasing the potential for trade in perishable goods, and lower transportation time and overall costs) as well as to military activity. Therefore, if greater distance 'reduces the capability to fight' (ibid) it can also reduce the potential for trade.

3. Cultural Affinity

Actor behaviour can be influenced by awareness of perceived and actual cultural affinity. This study defines cultural affinity as the extent of shared language and religious characteristics, and posits that where cultural similarities are intense (for example, where two communities share the exact same language and religion) there will likely be an impact on bilateral trade. Culture can influence the types of goods and services that are required, for example, food and clothing products that meet specific religious standards; or services provided in a common language, such as Arabic. 0 is assigned where 0-9% of the population of each community share the same cultural element; 1 is assigned where 10-39% of the population of each community share the same cultural element; 2 is assigned where 40-79% of the population of each community share the same cultural element; and 3 is assigned where 80+% of the population of each community share the same cultural element.

4. *Population size*

The size of a population is synonymous with the size of market (when combined with GDP and GDP per capita as discussed below). Market size determines the potential for trade, with an advanced, large market of affluent citizens having the ability to purchase goods and services (leading to a high demand for imports), and large productive capacity (the ability to produce/provide goods and services for export). Less advanced, small markets with poor citizens, on the other hand, will have limited import needs due to low purchasing power and low demand, and less productive capacity and thus low export potential. The World Bank's Databank has been used to create a dataset on population sizes for each state and dyad.

5. *GDP Size*

The size of a state/market's economy, as measured by GDP (purchasing power parity (PPP) method) acts in much the same way as population size, in shaping demand for imports, and capacity for exports. The World Bank's Databank has been used to create a dataset on GDP PPP for each state and dyad.

6. *GDP per capita*

The total size of a state/market's economy is determined, not only by overall GDP and population, but also by the affluence of the population and, therefore, the purchasing power of individual consumers. A relatively large GDP but small affluent population may limit imports and exports. Likewise, a large, yet poor population will also limit imports and exports. Assessing the purchasing power of individual consumers is, therefore, necessary. The World Bank's Databank has been used to create a dataset on GDP per capita (PPP) for each state and dyad.

Stage two

The Independent variable – *Trade Volume (1950-2014)*

The same dataset on trade volume for each MENA dyad-year used in stage one is used here.

The Dependent Variable – *Peace*

Peace is a difficult concept to quantify, measure and analyse. Building on work done by other scholars, this study considers peace to be the absence of militarised interstate disputes (MIDs). As such, where an MID exists we can conclude peace is absent. The Correlates of War classifications of MIDs is used here, where an MID can be any of the following: *the threat of force, display of force, or actual use of force against another state*. Aydin (2010) uses data on militarized actions from the

Correlates of War (CoW) data set on Militarized Interstate Disputes (MID) 2.1 Dataset. These datasets are used by Aydin to collect evidence on the initiators of conflict and on the capabilities of potential attackers and defenders. Goldsmith (2013) also uses these sources.

Oneal and Russett (1999) use the CoW data on MID to examine involvement in MID as one of their dependent variable. Where a MID has taken place 1 is used, while 0 is used if no MID occurred. They 'code each year that a dyad was involved in a dispute in which one or both states threatened to use force, made a demonstration of force, or actually used military force against the other' (ibid: 10). They lag their independent variables by one year (as most studies do to ensure that the variables are not affected by the dispute being analysed (if one occurs)). Of particular importance to this current study is their approach to economic interdependence. They use IMF statistics on bilateral trade from the IMF's Direction of Trade statistics dataset and posit that the 'likelihood of a dispute [is] primarily a function of the freedom of the less constrained state to use force' (ibid: 13), where having a lower trade-to-GDP ratio in any given dyad represents being less dependent on said trade and, therefore, less constrained on behaviour to the dyadic partner. Oneal and Russett also consider capabilities, alliances, and contiguity and distance as important variables in their overall analysis of the three Kantian hypotheses.

The control variables

1. Contiguity and proximity/distance

As highlighted above, under normal conditions (i.e. where one or both dyad states are not global hegemon or great powers) the farther two states are from each other the less they have to fight about. Therefore, contiguity may increase the chances for conflict, while dyadic peace increases along with distance. The same dataset used in stage one is used here.

2. Regime Type (form of governance)

Data on political regime types was collated using the Centre for Systemic Peace's Polity IV project, where each state being studied here is awarded a score of +10 (absolute democracy) to -10 (absolute autocracy). This methodology allows us to control for the more pacific behaviour of democratic states and the more aggressive behaviour of autocratic states. The assumption held here being that a dyad constituted by two democratic states (with higher Polity IV scores) will be more peaceful than dyads constituted by either one democratic and one autocratic state, or two autocratic states.

3. Military capabilities (composite indicator of national capabilities (CINC))

It is important to control for the balance of power/balance of threat. Where one dyadic state is militarily superior the weaker state is more likely to be deterred by the imbalance of power that favours its partner. The opposite may be true for the more dominant state which will not be deterred in the same way. A dataset of national military capabilities has been created using the Correlates of War's National Material Capabilities (v.4.0) – the composite index of national capabilities (CINC) scores have been used. This data considers: iron and steel production; military expenditures; military personnel; primary energy consumption; total population; and urban population.

4. Alliance

As highlighted above, state behaviour can be constrained/influenced by alliances and so it is important to assess the nature of any formal alliance agreements between the states being studied here. The Correlates of War's Formal Alliance v4.1 dataset is used here to collect data on four types of alliance: defence, neutrality, nonaggression, and entente pacts, covering the period of study (1950-2014). This data set has been used to score all individual dyads 0-4 according to the number of formal alliance elements (0 where no formal alliance exists, 1 where only one element (e.g. a defence pact) exists, 2 where two elements exist, 3 where three elements exist, and 4 where all four formal alliance elements exist).

5. Institutional Membership

State behaviour can be constrained/influenced by international laws and in particular membership in inter-governmental organisations. Therefore, joint IGO membership is measured for each dyad throughout the period of study and scores generated. The Yearbook of International Organizations and the Correlates of War have been used to create a single dataset on IGO membership for states studied here. The Correlates of War numerical value system has been used to generate dyadic scores. This system is as follows: No Membership = 0; Full Membership = 1; Associate Membership = 2; Observer = 3.

6. Cultural affinity

Actor behaviour can be influenced by awareness of perceived and actual cultural affinity. This study defines cultural affinity as the extent of shared language and religious characteristics, and posits that where cultural similarities are intense (for example, where two communities share the exact same language and religion) they will be more peaceful in their relationship with one another. Likewise,

where there is no cultural affinity, there will be less inhibitors to conflict. The same dataset for cultural affinity used in stage one is used here. A dataset has been created for this study that scores each dyad on a scale from 0-6 by totalling scores for two elements (language and religion).

7. Trade Interdependence

Accounting for trade volume only tells us part of the story when considering the deterrent effects of trade. We need to also control for the significance of any given trade relationship to each dyad state. Trade interdependence relates to the proportion of dyadic trade to each state's overall trade – where a higher percentage of overall trade equates to a more relevant trade relationship, and the lower the percentage of overall trade equates to lower importance for the trade relationship.

Findings (incomplete section)

Stage One

Variable	No. of Observed Dyad Correlations (/10,080)	% Dyad Correlations
C.I. (Ind.)	360	3.6
Trade Congruence	4704	46.7
Contiguity/Distance	2400	23.8
Cultural Affinity	600	5.7
Population Size	480	4.8
GDP	1632	16.1
GDP Per Capita	2784	27.6

Hypothesis 1 = Disproven

Stage Two (incomplete)

Variable	No. of Observed Dyad Correlations (/420)	% Dyad Correlations (1990-2014)
Trade Volume (Ind.)		
Contiguity/Distance		
Regime Type		
Military capabilities		
Alliance Institutional Membership		
Cultural affinity		
Trade Interdependence		

Hypothesis 2 =

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